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The effect of weekly teacher collaboration on instructional practices in the classroom

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THE EFFECT OF WEEKLY TEACHER COLLABORATION
ON INSTRUCTIONAL PRACTICES IN THE CLASSROOM

A Dissertation

Submitted

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

Approved:

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December, 2009

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TABLE OF CONTENTS

PAGE

LIST OF TABLES.....	vii
CHAPTER 1: CONTEXT OF STUDY	1
Introduction.....	1
Statement of the Problem.....	3
Assumptions.....	4
Limitations	4
Purpose of the Study	5
Methodology	7
Definition of Terms.....	8
Organization of the Study	9
Summary	10
CHAPTER II: REVIEW OF LITERATURE	12
Introduction.....	12
Historical Context.....	15
Concept of Professional Development Over Time	17
The Iowa Professional Development Model.....	19
Benefits of Teacher Collaboration.....	21
Barriers or Challenges of Collaboration	25
Theory/Practice Gap	28
Summary	31

CHAPTER III: METHODOLOGY	34
Introduction.....	34
The Purpose of the Case Study	34
The Research Questions.....	35
Site Selection	35
Participant Overview	38
Individual Participants	40
Data Collection	43
Description of Types of Data Collected for the Study.....	44
Interview Data Collection.....	47
Observation Data Collection.....	51
Data Collection Timeframe.....	56
Data Analysis	58
Initial Categories and Themes	64
Establishing Trustworthiness	73
Protection of Human Rights.....	75
Summary	76
CHAPTER IV: RESULTS AND DISCUSSIONS	77
Introduction.....	77
Teacher Learning	77
The Benefits to Teacher Learning.....	78
Barriers to Teacher Learning	87

Student Learning.....	94
Benefits to Student Learning	94
Barriers to Student Learning.....	101
Socialization/Culture.....	102
Benefits to Socialization/Culture	102
Barriers to Socialization/Culture.....	106
Summary	110
CHAPTER V: CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS	112
Introduction.....	112
Conclusions.....	113
Discussion	130
Recommendations.....	139
Recommendations for Future Research	144
REFERENCES	147
APPENDIX A: IOWA PROFESSIONAL DEVELOPMENT MODEL.....	152
APPENDIX B: INTERVIEW PROTOCOL.....	153
APPENDIX C: FIRST INTERVIEW QUESTIONS.....	154
APPENDIX D: SECOND INTERVIEW QUESTIONS	157
APPENDIX E: THIRD INTERVIEW QUESTIONS.....	159
APPENDIX F: PERMISSION FROM THE SUPERINTENDENT OF SCHOOLS TO COMPLETE THE STUDY	161
APPENDIX G: WRITTEN INFORMED CONSENT	162

APPENDIX H: RELEASE FOR VIDEO AND/OR AUDIO RECORDING	165
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LIST OF TABLES

TABLE		PAGE
1	Study Timeframe	57
2	General Categories, Themes, Sub-Themes, Key Words, Participant Responses and Collaboration Focus	66
3	Identified Categories and Themes, Definitions, Sub-Themes, Key Words, Sample Participant Responses, and Sample Teacher Collaboration Focus	71

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ABSTRACT

The Iowa Standards for School Leaders states that, “A principal is an educational leader who promotes the success of all students by advocating, nurturing, and sustaining a school culture and instructional program that is conducive to student learning and professional growth.” Instructional practices have a significant impact on student learning, with research indicating that effective teaching accounts for two thirds of the total effect of schooling on student learning. Moreover, the literature on school improvement and professional development emphasizes the building of organizational capacity through collegial interactions in school (Leonard & Leonard, 2003).

The Iowa Professional Development Model was developed with the intent of improving instructional practices through high quality, sustained professional development at the local level. An important component of the Iowa Professional Development Model includes opportunities for teacher collaboration that involves the study of instructional practices and student response to instruction. Most school districts in the state of Iowa have embraced the Iowa Professional Development Model as the model for district and building level professional development.

The purpose of this case study was to determine the effect of weekly collaboration on teacher instructional practices in the classroom. Additionally, the study sought to understand how teachers perceive the impact of weekly collaboration on instructional practices and to identify if there were differences in these perceptions. The case study involved six elementary teachers with varying levels of experience in and out of a school district. Open ended interviews, classroom and professional development session

observations, and teacher artifacts were analyzed in order to identify key categories and themes regarding the effects on teacher instructional practices as well as teacher perceptions about weekly teacher collaboration.

The case study identified three major categories on the effects of teacher collaboration on instructional practices. Additionally, the case study uncovered the benefits and barriers to teacher collaboration. Regularly scheduled teacher collaboration positively affects teacher instructional practices by impacting teacher learning, student learning and by creating and sustaining a culture of shared learning. However, there are challenges or barriers to teacher collaboration that prevent teams from meeting their full potential as collaborative learning teams.

CHAPTER I

CONTEXT OF STUDY

Introduction

Standard 2 of the Iowa Standards for School Leaders (Iowa Department of Education, 2007a) states that, “A principal is an educational leader who promotes the success of all students by advocating, nurturing, and sustaining a school culture and instructional program that is conducive to student learning and professional growth.” Strong leadership sets expectations for accountability and the implementation of research based instructional practices in the classroom. Instructional practices have a significant impact on student learning, with research indicating that effective teaching accounts for two thirds of the total effect of schooling on student learning (Darling-Hammond, 2000). The Iowa Professional Development Model (Iowa Department of Education, 2002a) was developed with the intent of improving instructional practices through high quality, sustained professional development at the local level. An important component of the Iowa Professional Development Model (IPDM) includes opportunities for teacher collaboration that involves the study of instructional practices and student response to instruction. The focus is on best practices in teaching, which in turn is expected to translate to improved student achievement.

Over the past several years, research on school improvement and professional development has identified a consistent message in regard to the most effective ways to improve student achievement. It comprises a set of variables rather than a single action that will lead to improved student achievement. These variables include;

- The use of data in leading professional development and the identification of student achievement goals,
- Aligning assessment with curriculum and instruction,
- Providing research based professional development at the building and district level,
- The study of implementation data for planned changes in student achievement goals and instructional practices,
- The need for teachers and administrators to work collaboratively in learning new skills and knowledge and implementing effective instructional practices,
- Summative and formative assessment to determine how planned change in instructional practices have impacted student achievement, and
- Strong leadership that includes working collaboratively with teachers to guide professional development and school improvement processes.

A review of the literature also indicates that when professional development is focused at the individual school level, a sense of school community or a professional learning community is more apt to occur. (DuFour, 1995; Hausman & Goldring, 2001; Melnick & Witmer, 2007) argue that teachers must be fully engaged and involved in their own professional development at the building or school level. They further indicate that encouraging active teacher involvement through professional development may allow teachers to bring about school or systemic reform.

Additionally, the No Child Left Behind Act (United States Department of Education, 2001) and the Iowa Professional Development Model have reinforced that

multiple research based professional development variables must operate simultaneously in order to increase student achievement at the local level. At the forefront of these variables is the focus on sustained teacher collaboration that is embedded within the teacher work day. When teachers collaborate to address important instructional issues, teaching and learning may be enhanced (Crow & Pounder, 2000; Goddard & Heron, 2001).

The National Staff Development Council has also published literature and guidance for not only the focus of staff development but the content and context of staff development at the local level. There appears to be considerable evidence that well-designed professional development, when implemented fully and within the context of school improvement practices, can positively impact student achievement. Schools that successfully implement a well-designed professional development plan include opportunities for teachers to examine data and set specific goals aligned to the student achievement data. Additionally, there appears to be a “team mentality” of working together to improve student achievement (Barton, 2005).

Statement of the Problem

Every school district in the state of Iowa must identify, in the district’s Comprehensive School Improvement Plan, a model for professional development. Most school districts in the state have embraced the Iowa Professional Development Model as the model for district and building level professional development. The focus on determining the effectiveness of the model has been on student achievement results. Teachers and administrators are the primary implementers of the Iowa Professional

Development Model: This study focuses on one specific component or variable of the Iowa Professional Development Model, the effect of teacher collaboration on instructional practices in the classroom. More specifically, the research questions are,

1. What effect does weekly teacher collaboration have on instructional practices in the classroom?
2. Are there differences in teacher perceptions on impact of weekly teacher collaboration?

Assumptions

There are a number of assumptions to consider in this study. First, it is assumed that teachers at the building level are fully involved in the implementation of the Iowa Professional Development Model. Moreover, it is assumed that at the building level, the Iowa Professional Development Model is being implemented with integrity and that all elements of the model are being fully implemented. It is also assumed that the teachers, when interviewed, are open and honest in their responses concerning weekly teacher collaboration. Lastly it is assumed that differences and similarities in instructional practices would be identifiable due to individual teachers' years of experience in and out of the district.

Limitations

Every research study has limitations. This case study is limited to six teachers with varying years of teaching experience in a building that has implemented the Iowa Professional Development Model for five years. The number of teachers in the case study could be a limitation to generalizing any conclusions from the study. Additionally,

not all districts who currently implement the IPDM have been implementing the model for the same length of time or with the same level of consistency as this district or building. Teacher collaboration is an important aspect of the Iowa Professional Development Model. For the last five years, this school built weekly collaboration time for all teachers into the schedule. The results of this case study may not be representative of those schools that do not have the same model for teacher collaboration time.

Purpose of the Study

The district in this study has put in place structures at the elementary level for teachers to have the time to meet on a weekly basis for the purpose of working collaboratively on instructional practices. The focus of the weekly collaboration sessions are on instructional practices, studying student effect on instructional practices and planning lessons that align with individual and team professional development plans. Teachers meet one morning a week for 45 minutes. Meetings occur before students begin the school day. Teachers meet as grade level teams or specials teacher teams in each elementary school's media center.

The purpose of this case study is to identify the effect of weekly teacher collaboration on instructional practices in the classroom. Additionally, to understand how teachers perceive the impact of weekly collaboration on instructional practices and to identify if there are differences in teacher perceptions. Most school districts in Iowa use the Iowa Professional Development Model for building and district level professional development. An important component of the Iowa Professional Development Model is teacher collaboration. A significant amount of time and financial support is allocated

from year to year for building level professional development and more specifically to allow time for teacher collaboration. While it is important to determine the student achievement effects, it is also important to identify the effect of the Iowa Professional Development Model on teacher instructional practices in the classroom. Specifically, this study attempts to identify the effect of weekly teacher collaboration on instructional practices in the classroom. Additionally, teachers involved in this study are at different points in their teaching careers. Therefore, the case study will ascertain if there are differences in teachers' instructional practices due to where they are at in their teaching career and how weekly collaboration is perceived as impacting instructional practices by teachers with varying years' of experience in and out of the district.

The data collected from this study could be used by school districts and at the state level to further refine teacher collaboration processes that impact instructional practices in the classroom. Implementing professional development programs with consistency and integrity has been found to have a significant effect on teacher instructional practices (Desimone, Porter, Garet, Yoon, & Birman, 2002). The data could identify the professional development program characteristics and systems that need to be in place in order for regular and consistent teacher collaboration to positively affect instructional practices in the classroom. The data collected can also be used to determine what kinds of structures need to be in place in order for teachers to effectively collaborate on teaching strategies, the study of student work, and instructional practices in general.

Methodology

The methodology for the case study includes observation, lesson plan study, Individual Professional Learning Plan study, and interviews with six teachers at Great Plains Elementary School. Data for this study came from a number of sources. First, the six teachers in the study were observed during building level professional development. Data collected from these observations includes the frequency of professional development work that occurred individually versus as a team or collaboratively, the frequency and intensity of interactions that occurred with colleagues during professional development time and lastly, how engaged the individuals appeared to be during professional development presentations and activities. The participants in the case study were observed at least three times for a 45 minute time period during each observation. Analysis included looking for differences and similarities in professional development engagement, the type and frequency of collaborative work that occurred with the teachers and their colleagues, and the frequency of professional dialogue with colleagues.

Additionally, each of the six teachers was interviewed three times during the study. These interviews were unstructured and questions presented to the interviewees were open ended. The data collected from the interviews was analyzed to identify the effect of weekly collaboration on instructional practices in the classroom. The analysis included the identification of differences and similarities of responses among the teachers as it relates to collaboration and how it affected his/her instructional practices in the classroom. Analysis also included what teachers identified as the structures that need to be in place for effective teacher collaboration, what kinds of supports are needed from

building and district administration in order to effectively collaborate and how each teacher perceived the effectiveness of their individual teams' collaborative practices.

Lesson plans were collected and analyzed over a three month period of time. Analysis of the lesson plans focused on the frequency in which learning strategies taught and practiced during professional development collaboration time were embedded in teacher lesson plans. The analysis of lesson plans looked for trends or similarities and differences of how the strategies are implemented in each of the teacher's classrooms. Lastly, each teacher was observed on at least one occasion in order to determine what effect weekly collaboration had on instructional practices in the classroom.

Definition of Terms

Iowa Professional Development Model- A research based model for professional development that was developed collaboratively with the Iowa Department of Education, educational researchers, and school district stakeholders. The model is a cyclical process that involves analyzing student data, setting goals, and identifying content, context and processes for professional development which includes job embedded collaboration among staff and administrators.

Teacher Collaboration- Teachers having the opportunity to learn, share, and build expertise together. Teachers who meet regularly for the purpose of studying and discussing student achievement data, lesson design, lesson analysis, best practice research, and peer coaching.

Distributive Practice- The use of problems and activities that help students learn to use multiple representations, and learn to use multiple reasoning strategies.

Distributive practice uses problems from a variety of contexts so students learn to make connections.

Distributive practice was an area of focus in individual teacher's lesson plans when teaching mathematics in their classroom (Everyday Mathematics, 2000).

Additionally, implementation of distributive practice strategies was included in individual teacher's professional learning plans.

Explicit, Direct Instruction (EDI) - A systematic instructional approach that includes a set of delivery and design procedures derived from effective schools research merged with behavior analysis. The two essential components to well designed explicit instruction are;

1. Visible large group delivery processes that include a high level of teacher and student interactions.
2. Instructional design principles and structures that make up the content and strategies to be taught. (Hall, 2002).

Explicit, Direct Instruction (EDI), is an identified building wide instructional approach used by all Great Plains Elementary School teachers. EDI approaches are referenced in individual teacher's professional learning plans.

Organization of the Study

Chapter I of this case study includes an introduction to the study, statement of the problem, purpose of the study, and the conceptual framework of the study. Additionally, this chapter includes definitions of terms used in the study, limitations and assumptions of the study and finally the organization of the paper.

Chapter II includes a review of the literature, history of teacher collaboration and the Iowa Professional Development Model and how the Iowa Professional Development Model correlates to widely accepted research based best practices in professional development. Additionally, this chapter addresses the characteristics of collaboration, the theory/practice gap of teacher collaboration, benefits of teacher collaboration, and the challenges or barriers to teacher collaboration.

Chapter III focuses on the description of the methods used in the study, including an explanation of each of the participants, experiences and tenure in education of each of the participants, and procedures used by the researcher for data collection.

Chapter IV explains the results of the study and Chapter V discusses the results of the research including recommendations for further study and implications of the study for teachers, principals, and school systems.

Summary

The Iowa Department of Education, Iowa legislature, and Iowa school districts have invested a significant amount of resources in time and in financial support towards implementation of the Iowa Professional Development Model. Previous studies related to the Iowa Professional Development Model have focused on student achievement results. This case study attempts to identify in one district at one school the effects of an important component of the Iowa Professional Development Model. That is, the effect of weekly teacher collaboration on instructional practices in the classroom. The implications identified in this case study may assist school leaders in determining what professional development collaborative processes and procedures need to be in place in order to

positively impact instructional practices in the classroom. This study may also assist the state in determining methods of evaluating the collaboration component of the Iowa Professional Development Model for the purpose of continuous improvement of professional development program models.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Over the past decade, there has been a large body of literature focusing on the importance of professional development in enhancing teacher effectiveness. More specifically, there have been numerous articles and books that focus on what constitutes “best practices” in professional development. However, relatively little research has been conducted on the effects of various alternative forms of professional development such as teacher collaboration. What research is available gives some preliminary guidance in regard to characteristics of high quality professional development, specifically in the area of teacher collaboration.

For example, John Hiebert (1999b), in a review of the research on mathematics teaching and learning conducted for the National Council for Teachers of Mathematics, focuses on the importance of high standards, math content focus, and in-depth learning opportunities for teachers. In his review he states,

Research on teacher learning shows that fruitful opportunities to learn new teaching methods share several core features: a) ongoing (measured in years) collaboration of teachers for purposes of planning with, b) the explicit goal of improving student achievement of clear learning goals, c) anchored by attention to students’ thinking, the curriculum, and pedagogy, with, d) access to alternative ideas and methods and opportunities to observe these in action and to reflect on the reasons for their effectiveness (1999b, p.15).

When teachers discuss that they collaborate, they often mean many things. They may mean that they meet to discuss issues and concerns about individual students. They may also mean that they meet in order to set up schedules or plan special events. Other

times, it may mean that they attend a meeting or training together. It may also mean to teachers that they are developing lessons together, studying student achievement data, and analyzing student work.

Friend and Cook (1992) define collaboration in an intentionally general manner. They also identify specific characteristics of collaboration. “Interpersonal collaboration is a style of direct interaction between at least two co-equal parties voluntarily engaged in shared decision making as they work toward a common goal” (p.5).

More specifically, Friend and Cook (1992) identified six characteristics of collaboration. They are;

- Collaboration is voluntary. Teachers may be required to work in close proximity but they can not be “made” to collaborate. Teachers must make a personal choice to work collaboratively.
- It is based on parity or equality. Teachers who collaborate must believe that everyone’s voice must be heard and that all ideas/opinions are valued. The amount of what individual teachers may offer in the collaborative process may differ, but teachers recognize that what they offer is essential to the collaborative process.
- It requires shared goals. Teachers collaborate when they have a common goal. If they are working with poorly defined goals, it can create miscommunication and frustration rather than collaboration.

- Teachers have shared responsibility for key decisions. They may divide up the duties and responsibilities during collaboration, but each teacher's effort and offerings carry the same weight in the collaborative process.
- Teachers share accountability for results and outcomes. This occurs through shared responsibility and shared decision making processes.
- Teachers who are part of a collaborative process share resources. Everyone is responsible for sharing resources. This increases commitment and reinforces each teacher's value in the process.

All of these characteristics are essential in the collaborative process. They must occur as part of the day to day practice of teachers rather than in isolation or occurring intermittently. "Team learning is the coursework that nobody offers. It is the ability to think and learn together." (Cambron-McCabe, Cunningham, Harvey, & Koff, 2005, pps. 50-51). Collaboration requires deep conversations and complex strategies for learning together. It does not occur without resources, hard work and the persistency of the team to stay focused on a shared goal.

Garmston and Wellman (2003) advise that collaboration and collegiality do not happen by chance. Collaboration must be structured, taught and learned. A collection of "superstar" teachers working in isolation does not produce the same results as a group of interdependent colleagues who have the same focus and share and develop professional practices together (Garmston & Wellman, 2003).

Historical Context

The traditional culture of schools, particularly at the secondary level, has been to have teachers work in isolation. Teachers are colleagues in word only. They work out of sight and sound of each other, plan and prepare materials on their own and struggle on their own to solve their instructional, curricular and management problems.

The post Sputnik era emphasized isolationism in schools. The focus was on implementation of programs and content learning rather than studying teaching, learning, coaching and analysis of data. Moreover, the focus was also more managerial versus an emphasis on instructional practices and outcomes of those practices in the classroom. The principal's role was that of being supervisor or director of education. The principal did not learn alongside the teacher. There was little attention from school leaders to build strong professional learning communities.

The task of teaching was more stable and less complex than it is today. Teaching was about the transmission of knowledge, skills, habits and culture. It was a conservative proposition (Fullan, 2001). Teachers were able to shut their doors and be the "sage on the stage." There was little discourse among teachers concerning the teaching process. The focus was on content with few opportunities for professional learning other than through episodic training events or topics that were often disconnected from practice.

In traditional schools of the past, teachers felt isolated. The traditional norms of teacher practices included norms of isolationism and individualism. There were few if any formal opportunities for collaboration. Due to teachers' busy schedules and multiple responsibilities, collaboration was not something that occurred as part of a teacher's

position. If collaboration was to occur, it was initiated by the teacher rather than by the system. When teachers did meet informally to collaborate, the underpinnings of those interactions were rather weak (Hargreaves, 1994).

In the 1970's Lortie (1976) reported that teachers worked in situations which separated them from their colleagues both physically and intellectually. There was infrequent or limited professional sharing among teachers. In Goodlad's (1984) work, *A Place Called School: Prospects for the Future*, he reflected that teachers interacted very little with each other in or among schools. There was little incentive for sharing of practices and knowledge and professional development was driven by individual choice versus through a systems approach. In the mid 1990's Elmore (1995) determined that while there was an increased understanding or recognition of how schools might better operate, there appeared to be little incentive for teachers to change their daily practices or routines.

Even today, teachers experience levels of physical and intellectual isolationism. Teachers see each other at odd times in the day. This typically occurs at the beginning of the day in the halls, in the middle of the day in the lunchroom, and after school. Teachers see each other formally at after school meetings or during planned preparation periods. There is little time for reflection and dialogue on instructional practices at these times. This further reinforces isolation and autonomy. Teacher autonomy, particularly at the secondary level, is grounded in norms of privacy and non-interference. Many teachers believe that other teachers' activities are "none of my business" (Little, 1990). Further

reinforcing privacy and autonomy is the American ideal of individualism that is so much a part of our culture today.

In the past decade, building organizational capacity through collegial interaction in schools has recently become prominent in much of the literature on education reform and school improvement (Leonard & Leonard, 2003). The idea or focus on teachers and administrators building a community of learners has permeated the literature over the past several years (DuFour, 1995). Schools are encouraged to build a community of learners or a professional learning community through shared vision, goals, and purposes that are aligned to student achievement results. State mandated school reforms along with the federally mandated “No Child Left Behind Act”(United States Department of Education, 2001) has increased expectations for educators to do more to ensure that all students meet standards of learning performance. Associated with these state and federal mandates is the endorsement of collaborative practices among educators through systematic professional development practices.

Concept of Professional Development over Time

Concepts of professional development in education have both broadened and deepened over the past two decades. Professional development has moved from a model that emphasized the acquisition of discrete skills and behaviors to a more complex vision of teacher thinking, learning, and practice in particular subject domains. The concept of professional development in schools has moved from an individualistic view of teacher growth to a view that emphasizes a school’s collective capacity and that credits the potential power of a strong professional community.

Additionally, professional development plans have become more sophisticated. Plans that were once laundry lists of activities are now more often framed in terms of explicit links between student learning goals and expenditure of professional development resources. This is certainly evident in the new Iowa legislation for teacher quality and professional development outlined in SF 277, Teacher Quality Legislation, (Iowa Department of Education, 2007b). This legislation requires that building, district and individual professional development plans align specifically to student achievement goals and that each district identifies the percentage of resources that are aligned to district, building, and individual professional development plans. Moreover, determining the percentage of the professional development funds that will go to district, building and individual professional development plans is the responsibility of the district Teacher Quality Committee. This committee is made up of both administrators and teachers working together to make decisions concerning professional development funds.

Again, the most significant factor determining whether students learn is teacher quality (Darling-Hammond, 2000). The quality of teaching is improved through high quality, continuous professional learning. There is a considerable amount of literature that speaks to “best practices” in professional development or professional learning. Additionally, a professional consensus is emerging that identifies particular characteristics of “high quality” professional development (Desimone et al., 2002). These characteristics include a focus on content and how students learn the content, active learning opportunities that include teacher collaboration links to high standards, opportunities for teacher leadership, collective participation of groups of teachers from

the same school, grade or department, and professional development that occurs over an extended duration of time (Desimone et al., 2002).

It is understood, that without consistently good teaching, student achievement, particularly of those students who are targeted in the “No Child Left Behind Act” (United States Department of Education, 2001), will not improve over time. Many districts across the state of Iowa as well as nationally recognize this and have systems in place that focus on improved instructional practices through professional development. In fact, the teacher quality requirement of having “highly qualified teachers” in every classroom has prompted school districts to focus more intently on high quality professional development and to encourage teachers to work together in order to improve the learning of all students.

The Iowa Professional Development Model

The Iowa Professional Development Model (Appendix A, Iowa Department of Education, 2002a) is a good example of the shift to having systems in place to improve teachers’ practices. This model is a cyclical model in which teachers are required to study theory and apply this theory in classrooms as improved instructional practices. Additionally, schools analyze not only student achievement effect as the result of implementation of these practices but also teacher implementation data. The study of implementation data is used to determine how effectively and consistently teachers implement the learned strategies and professional development content in their classrooms. An important component of the Iowa Professional Development Model (IPDM) is the expectation that teachers will work collaboratively as they study the

research, apply the research and content in their own classrooms and ultimately study the effect of their individual and collective practices together in order to positively impact student achievement. Practice throughout the professional development model as well as classroom implementation of strategies center around building goals that are identified through the Comprehensive School Improvement Plan as a result of student achievement data at the district and building level.

Collaboration is to be built in to the day with opportunities for teachers to work together on a regular basis. The professional development process is part of the day to day operations or work of teachers. The focal point of professional development is at the building level. Time is provided for workshop experiences and workplace supports, such as planning together, rehearsing and observing lessons through peer coaching, practicing strategies in the classroom, and collecting, analyzing and discussing data (Iowa Department of Education, 2002a).

Some districts have developed comprehensive programs to train and support teachers in an effort to meet the overarching goal of improved student achievement. Additionally, districts have hired academic coaches for teachers or provided means in which teachers have time within the context of the school day to collaborate. The purpose behind these kinds of structures is to provide focused effort to help teachers improve their instruction. Moreover, these structures help to reinforce a collaborative learning community environment in these districts.

The Iowa Professional Development Model has existed since 2002. The effects of this model on individual school or district professional development vary across the

state. Districts that initially embraced this model as part of their professional development plan have been attempting the implementation of the various components or variables of the model with mixed results. The teachers from the school in which this study took place are in a district that embraced the IPDM early in its conception. The district continues to refine the model and resources in order to have a more direct impact on student achievement.

Benefits of Teacher Collaboration

The rationale for collaboration is solid. Eastwood and Seashore-Louis (1992, pps. 212-214) believe that a collaborative environment is the single most important factor in successful school improvement. They argue that establishing an environment with collaborative problem solving and harmonious relationships “should be the first order of business” for principals and other school leaders. Collaboration helps teachers to work through instructional dilemmas and as a result, teachers learn from each other how to respond to these dilemmas.

The Bill and Melinda Gates Foundation provided funds to schools that attempted to address student achievement discrepancies through innovative instructional and professional development practices. An evaluation of the first cohort of schools funded by the Bill and Melinda Gates Foundation indicated that “the degree, to which the reinvention process moved forward in a school during the second or third year of the grant, was dependent on a number of factors, including the ability of adults in the school to work together successfully.” (Fouts & Associates, 2003). It was evident there was newfound value for collaborative practices as many of the grantee schools and some

teachers described improved collaboration as their “biggest accomplishment” (Fouts & Associates, 2003). Teachers who collaborate are more comfortable with sharing parts of the curriculum that they may be less comfortable teaching. Collaboration allows for discussion and shared planning on how to teach curriculum that may be less comfortable for some teachers than for others who are more experienced in that particular curricular area.

Garmston and Wellman (2003) found successful schools have teachers that are interdependent along with having shared norms and values. Teachers also share a collective focus on student learning, deprivatized practices, and engage in reflective dialogue. Where teachers take collective responsibility for student achievement, students show greater gains in core content areas. This is especially true of minority students and students of low socio-economic backgrounds (Garmston & Wellman, 2003). When teachers are working together, they gain perspective about student learning and behavior problems and a better understanding of which students may need individualized or specialized assistance.

Furthermore, collaboration has an even more direct impact on students in that they not only benefit from the instruction of one teacher but the knowledge and expertise of several teachers. Additionally, teachers are modeling collaborative behavior to their students. Teachers may nurture and accept more collaboration in the classroom if they are involved in collaborative relationships with their colleagues. Teachers also have more knowledge about more students than just those in their classes as teachers are interacting with each other and learning more about one another's students. It can

increase teacher enthusiasm concerning their work with students and alleviates the sense of isolation when working with challenging students.

Teacher collaboration can also increase the sensitivity among teachers concerning each teacher's role and responsibilities. It increases the awareness that everyone is working just as hard as their colleagues in addressing goals. This has an added benefit in that when this is paired with sharing of knowledge and skills, teachers feel more supported by their colleagues.

A collaborative ethic is more in line with the reality of societies and businesses of today. People can not effectively work in isolation. There is a move toward working collaboratively in order to improve the quality of products and services as well as to positively impact morale and career satisfaction. Teachers modeling collaborative practices to their students provide opportunities for students to learn how to work effectively with others and how to approach work related problems in a collaborative manner.

Collaborative practices do not occur by chance. "Collaboration requires certain skills, behaviors, and activities" (Garmston, 1997, p.3). School leaders must provide the groundwork in order for collaboration to happen. Leaders must provide structures and resources in order for teachers to learn processes for effective collaboration and implement these practices as part of the workday. "Schools where teachers work together best are those in which the principal and other leaders convey their faith in the power of interdisciplinary teams to make the school better for students" (Inger, 2003, p.5). Teachers must also have the latitude to make decisions concerning curriculum, grouping

of students, materials selection and instructional strategies which they believe best meet the needs of their students.

The practice of collaboration yields benefits for both veteran teachers and new, inexperienced teachers. A culture of collegiality saves the new teacher from the usual “sink or swim, trial and error ordeal” (Inger, 2003 p.2). For veteran teachers, it may prevent the end of the year burn out and stimulate new enthusiasm for teaching and learning. For new and veteran teachers, it “produces greater coherence and integration to the daily work of teaching. Further, it equips individual teachers, groups of teachers, and their schools for steady improvement” (Inger, 2003, p.6).

Additionally, based upon a constructivist point of view, knowledge is seen as constructed rather than received. Knowledge is explored rather than a memorized set of facts that are presented through event based professional development processes. Teacher collaboration allows for knowledge exploration and construction of knowledge based upon collective practices, research, and investigation. Through collaboration, teachers are encouraged to become active participants in research.

Collaborative action research requires teachers to engage in a cyclical process of questioning, planning, acting, observing, analyzing, reflecting, and possibly questioning further based upon the results of the analysis. Through collaborative action research both new teachers and veteran teachers become more reflective, critical, and analytical about their teaching behaviors in the classroom. Collaborative action research also promotes continuous learning among teachers (Showers & Joyce, 1996).

Goddard and Goddard (2001) completed a theoretical and empirical investigation of teacher collaboration on student achievement. The study employed data from 47 elementary schools and 452 teachers. Consistent with their hypothesis,

teacher collaboration was a statistically significant predictor of variability among schools in both mathematics and reading achievement. Specifically, a one standard deviation increase in the extent to which teachers collaborated on school improvement was associated with a .08 SD increase in average school mathematics achievement and a .07 SD increase in average school reading achievement. Thus, even with school means adjusted for student characteristics and school social context controlled, teacher collaboration for school improvement was a significant positive predictor of differences among schools in student achievement. (Goddard & Goddard, 2001 p. 16).

Barriers or Challenges of Collaboration

Several barriers to collaboration exist in schools. These include the physical location of classrooms, school structures and schedules, as well as individual teacher preferences of working in isolation rather than with a team. Education has a long history of isolation and reinforcement for teacher autonomy. Autonomy is grounded in the norms of privacy and non-interference. There is high value for autonomy for many veteran teachers (Inger, 2003). Because of the high value for autonomy, veteran teachers often refrain from giving advice or assistance to beginning teachers unless they are asked to do so by their principal.

Secondary schools are often organized by subject matter and secondary teachers view themselves as subject matter experts or specialists. The teaching subject gives teachers a frame of reference, a professional identity, and a social community. All of this is frequently reinforced by teacher preparation programs, teacher licensure, textbook design, curriculum frameworks, and even standardized test protocols.

The barrier of isolation is further reinforced particularly at the secondary level, through physical separation within a building. Career and technical education classes are often physically located far from the core content areas of science and mathematics. Students could benefit greatly from having teachers of mathematics and sciences collaborate with career and technical education teachers in the development of cross curricular lesson planning. Cross curricular lessons align more closely to real world work experiences, especially in engineering and technical areas.

Additionally, teachers are rarely provided opportunities and time within the day to meet and collaborate across curricular areas. Because of this, teachers have difficulty putting into practice what the research indicates is best practice for teacher collaboration. (Schmuck, 1997). Time must be provided within the context of the school day for teacher collaboration. Teacher teams must ask questions of themselves in order to define collaboration and their role in collaborative practices. If questions are not posed and addressed, effective collaborative practices are less likely to occur. Reflective questions concerning collaboration include,

- What does it mean to collaborate?
- How do we teachers collaborate?
- What structures need to be in place to help make collaboration happen?
- How do the power structures within an educational environment (principal as supervisor/evaluator) effect the development of collaborative practices?

Another barrier to collaboration is the fact that some teachers prefer or are used to working alone rather than with colleagues. Collaboration requires flexibility and

openness to new ideas. It requires a positive attitude concerning the impact that collaboration can have on one's own instructional practices. It also requires a willingness to share ideas and practices with others. This does not occur naturally for some educators and needs to be addressed throughout the planning, implementation and evaluation of teacher collaboration. Unfortunately, some schools have managed conflict by steering away from issues of conflict and not acknowledging that significant disagreements do exist among a team of teachers. These kinds of "pseudo communities" or "contrived collegiality" prevent educators from speaking honestly among one another (National Staff Development Council, 2007). This prevents teachers from working through conflict resolution and moving to a richer discussion and dialogue about teaching and learning that will in the end promote greater collegiality and collaboration.

Principals play an important role in either promoting collaboration among teachers or creating or sustaining barriers to teacher collaboration. If a principal creates or sustains a culture of isolation, individual teachers are left to their own devices for instructional improvement. These teachers have few if any opportunities to dialogue with their peers concerning teaching and learning. Principals must acknowledge the need for changes in structures and work arrangements in order to provide for improved teaching and learning (Khorsheed, 2007). Structures that principals put in place for the day to day work of teachers can either promote or discourage collaboration. These structures include such things as the norms of behavior for staff meetings and professional development, school schedules, school calendars, and supports and resources available to teachers within the school day.

Schools require strong leadership that is focused on school reform in order to promote and sustain collaboration among teachers. Leithwood (1990) shares that principals who are transformational leaders work to involve staff, share leadership, delegate power among teacher leaders, give staff a role in problem solving and decision making, and communicate confidence in the staff. Transformational leaders do not use authority to elicit teacher collaboration. Rather, the transformational principal consciously takes steps to encourage teachers to see the power of the collaborative process in improving instructional practices.

Theory/Practice Gap

There is a great deal of research to date concerning best practices in professional development. However, what may be in research is not necessarily what is implemented at the district, building or classroom level. Research on best practices in teacher professional development reveals that much of the content that is taught during professional development training is never put into practice. Additionally, successful implementations require collaborative teacher practices that focus on curriculum and instruction (Joyce & Showers, 1983).

Teachers will benefit from the collegiality of other teachers in order to implement changes in classroom instructional practices. They also benefit from the opportunity to work out problems together in order to solve the dilemmas that occur in the implementation of new practices. Plans for implementation must include a structure for teacher collaboration. Once implementation plans are in place, they should be monitored in order to determine if teachers are implementing plans with fidelity.

Principals or building and district leaders play a key role in professional development. It is the responsibility of school leadership to assure that the structures, resources, and supports are there in order to support and sustain teacher development through professional development processes. Additionally, principals must assist in developing a culture that encourages risk taking but also encourages the setting of norms of behavior for collaboration.

Principals can work toward creating a collaborative culture by providing opportunities for teachers to work together. However, collaboration should not be mandated. In order for it to be meaningful collaboration, it must be authentic (Little, 1999). The opportunities provided by principals should place teachers in conditions that call for shared responsibility. Structures or systems can be put in place that contribute to teacher collaboration, such as team teaching, action research, peer observations, common planning time, and shared decision making (Fullan & Hargreaves, 1996).

Additionally, when identifying systems for teacher collaboration, it is important that these systems are not narrowly focused on peer cooperation or peer coaching. Collaboration is more than this. Cooperation implies that teachers are sharing information. Collaboration not only provides for sharing of information but encourages learning together and deep conversations about learning and instruction. Collaboration creates a context for meaningful dialogue between and among teachers.

Peer coaching requires some collaboration. However, collaborative practices are more focused on thinking, planning, designing lessons, generating instructional materials, and studying student responses to these efforts (Iowa Department of Education, 2002a).

In collaborative practices, teachers review instructional practices based upon student response and together identify changes in instructional practices which will illicit a more positive student response.

Research on school reform indicates that schools that have disproportionately improved student learning have teachers and administrators who:

- Form professional learning communities
- Focus on student work (assessment)
- Change instructional practices pedagogy accordingly to get better results
- Have clearly defined, rigorous learning expectations, and
- Provide a supportive culture that encourages risk-taking, experimentation,

deprivatization of practice, and knowledge sharing (Bryk, Camburn, & Louis, 1997).

Educators who are part of a collaborative culture may not know if their collaborative efforts to help all students learn worked without focusing on results (Eaker & Keating, 2008). Teachers and administrators in collaborative cultures focus on evidence of student learning and use that evidence to not only improve student learning but to inform their practice (Eaker & Keating, 2008). Collaborative processes may include the study of student work, planning lessons that align to clear content standards, studying student achievement results, and developing common lessons that address student achievement deficits.

Unfortunately, schools often settle for collaboration that has little or no impact on what happens in the classroom (Eaker & Keating, 2008). School leaders must avoid this by articulating clear standards for teacher collaboration and the work that occurs during

collaborative time. Moreover, structures for accountability should be in place which encourages the individual and collective professional growth of all adult learners in the school community. Lastly, principals or school administrators must set the tone for collaboration by modeling their own collaborative practices with teachers and administrative colleagues.

Summary

The literature is clear as to what structures, practices and attitudes must be in place for effective teacher collaboration. Collaborative approaches provide access to more relevant information and alternative perspectives, promote reflective practice, help develop a culture that supports learning and professional growth and facilitates change in practices (Osterman & Kottkamp, 1993). Studies of teachers (Darling-Hammond & Sykes, 1999) have added to the understanding of reflective practices as part of teacher collaboration. From these works, educators can begin to understand the importance of supporting extended opportunities for teachers to share deep understandings and their practical knowledge.

There are many benefits to teacher collaboration. These include the power of collective learning and practice, the sharing of ideas, and study of student work in order to make informed decisions, and the promotion of collegiality among peers. Collaboration also helps teachers to work through the dilemmas of instruction, while learning skills from one another on how to address these dilemmas. Collaboration has a direct impact on students. Students receive the benefits of instruction that is developed collaboratively rather than by one teacher. Moreover, a collaborative ethic is more in line

with the reality of societies and businesses today. People do not work in isolation. We live in a more global society that requires individuals to work collectively and collaboratively in businesses, government, and in society as a whole.

There are a number of barriers that exist in educational systems today that prevent true teacher collaboration. One significant barrier is the historical nature of educational settings. Historically, especially in secondary school settings, teachers have worked in isolation. Teachers have appreciated their own autonomy in making decisions about their own students. Teacher attitudes also create a barrier to teacher collaboration. If a teacher prefers to work in isolation rather than in a team environment, little collaboration can occur among the team. Additionally, one of the greatest barriers to teacher collaboration is time. Structures need to be in place in order for teachers to have time to work collaboratively within the regular school day.

The reality of what occurs in schools today is not necessarily what promotes teacher collaboration. There is an understanding of what needs to be in place in order for collaboration to happen. However, there is often a gap in what should happen in schools to promote collaboration and what happens in practice. It is up to leaders in the school community to lead the school in a culture of collective and collaborative practice.

This study will identify what effect teacher collaboration has on instructional practices in a school that has structures in place to promote weekly teacher collaboration. Additionally, the study will identify teacher perceptions and attitudes concerning weekly collaboration and how they believe teacher collaboration have impacted their professional relationships with peers. Moreover, through teacher interviews, the study will indicate

what the participants in the study believe is the impact of teacher collaboration on student achievement. The study will also address the effects on instructional practices in the classroom through the analysis of lesson plans and individual teacher learning plans. Data was collected during professional development and classroom observations to determine how collaboration has affected instruction and interactions among collaborative teams. Lastly, the study will indicate what the participants in the study feel has been the impact on their instructional practices as a result of weekly teacher collaboration.

CHAPTER III

METHODOLOGY

Introduction

Six teachers from Great Plains Elementary School were the focus of this study. This chapter addresses the research questions, site selection for the study, study participants, and methods used to collect data for the study. Additionally, methods for analyzing the data will be discussed; focusing on the specific processes used to analyze data from teacher interviews, observations, lesson plans and Professional Learning Plans (PLPs).

The Purpose of the Case Study

The purpose of this case study is to identify what effect weekly teacher collaboration has on instructional practices. Additionally, the study addresses if there are differences in teacher perceptions on the impact of weekly collaboration on their instructional practices. One school, Great Plains Elementary School, was selected for participation in this study based on the school and school district's long term reputation for implementation and fidelity to the Iowa Professional Development Model. The Great Plains School District and the Great Plains Elementary School, which is one of four elementary schools in the district, have implemented the Iowa Professional Development Model for five years. Moreover, the district has provided resources in the form of time and professional development funds to support weekly job embedded teacher collaboration during this timeframe. Additionally, representatives from the school district and more specifically the school have been asked to speak at state level

professional learning experiences to share the school district's experiences with the Iowa Professional Development Model.

The Research Questions

The research questions for this case study are:

1. What effect does weekly teacher collaboration have on teacher instructional practices in the classroom?
2. Are there differences in teacher perceptions on impact of weekly teacher collaboration?

Site Selection

One school site was selected for this study. The case study was conducted at Great Plains Elementary School in the Great Plains School District. Great Plains Elementary School is located within close proximity to the researcher's place of residence and employment. Four years ago, the researcher had been employed as an elementary principal in the Great Plains School District. From there, the researcher served as school superintendent for a small school district near Great Plains School District. Currently, the researcher is employed in an intermediate educational agency as an educational administrator and does not provide services to the Great Plains School District. The researcher has been closely involved in school and district wide professional development and teacher collaboration as part of her role as a building principal, school superintendent, and Area Education Agency administrator.

It is not wise for an investigator to conduct a qualitative study in a setting in which he or she is already employed and has a work role. The dual roles of investigator and employee are incompatible, and they may place the researcher in an untenable position (Morse, 1994, p. 222).

The Great Plains School District is a growing district close to a thriving and diverse urban area. It has a student population of 4,500 students in grades K-12. Students who attend Great Plains School District live in five small surrounding communities and the southern edge of a larger urban community. Ninety five percent of all students who attend this school district are bussed to the schools. The district is unique in that all schools are located on the same campus.

Great Plains School District has a reputation of providing high quality educational experiences while embracing a small school/district attitude and personalization. The district is comprised of four elementary buildings, a middle school, and one high school. Each of the K-5 elementary buildings has a principal, a Title I teacher, two educational strategists, and a full time counselor. The role of the strategist is to assist the principal in leading professional development and monitoring instructional practices that directly align to the district and building school improvement plans. The strategists also work with students who are in need of direct instruction due to learning difficulties or who need academic extensions provided through a Talented and Gifted program.

The Great Plains School District employs a full time Director of Instructional Programs and a full time Elementary Curriculum Coordinator. These individuals provide the leadership in aligning the district's Comprehensive School Improvement Plan to building level school improvement plans. The district has made the commitment to provide substantial resources to support building level professional development through the allocation of time, personnel and support. Each month, the Elementary Curriculum Coordinator and building principals meet to plan the content of each building's

professional development for that month. In turn, the building principals bring this information back to the building leadership teams for further planning and implementation of building level professional development. An important component of each professional development session is teacher collaboration.

Great Plains Elementary School is one of the four K-5 elementary schools in the Great Plains School District. Decisions in regard to school attendance among the four elementary buildings are made at the district level in order to assure equity in student population across all four elementary buildings. Additionally, because the district office makes decisions concerning enrollment at each of the elementary attendance centers, all four elementary buildings have comparable enrollment figures as well as a comparable percentage of students who qualify for free or reduced meals and minority students. The Great Plains Elementary School has an enrollment of 550 students with 25% of the students qualifying for free and reduced meals. The school has a minority population of five percent.

Great Plains Elementary School was chosen based on the number of years in which it had implemented the Iowa Professional Development Model (IPDM) as the building professional development model. Additionally it was identified because weekly teacher collaboration time has been built in to the building schedule. Great Plains Elementary School, located in the Great Plains School District, has been identified as consistently implementing the IPDM with fidelity over the past five years with student achievement improving significantly over this time period.

A case study research approach was used in the study. When completing case study research, the researcher must spend extensive time in the field. The research is done over several months; studying and formulating tentative hypotheses and continually looking for evidence that supports or does not support the hypotheses (Denzin & Lincoln, 2003). The researcher spent several days over three months on site at the school completing interviews, observations, and analyzing lesson plans and Professional Learning Plans (PLPs).

Participant Overview

There were six participants from Great Plains Elementary School that took part in this case study. The selection of the individual teachers was done in a manner that protects confidentiality. The building principal was asked by the researcher to identify individuals who fit each of the three categories of teaching experience that were part of the study. The principal identified teachers who were in their first year of teaching, teachers who were in their first year of teaching in the district but were veteran teachers with at least five years of experience, and teachers who were veteran teachers who taught at least five years in the district. From these lists, the researcher personally contacted each individual to describe the study and to invite them to participate in the study. After the initial conversation with possible participants, two teachers were identified from each category to participate in the study. Selection was based on experience, grade level taught or area taught, and willingness to participate in the study.

Participant Selection

Six teachers from Great Plains Elementary School were selected by the researcher to participate in the case study. All six participants participated in the study for the duration of the study timeframe. The teachers had varying years of experience both in and out of the district. Two teachers were in their first year of teaching and their first year at the school. Two teachers were veteran teachers with at least five years experience but new to the district and school. Lastly, two teachers were veteran teachers with at least five years experience in the district and school.

Prior to beginning the case study, the researcher contacted each of the study participants and set up a meeting to further discuss the study as well as their role in the study. At these meetings, the researcher shared with each individual the purpose of the study, how confidentiality would be protected for each individual, methods of data collection and number of observations that were to take place during professional development sessions and in the classroom. Each participant was provided the opportunity to ask questions, share his/her concerns, and were offered the opportunity to not participate in the study if he/she had concerns about his/her participation in the study. All six identified teachers indicated their willingness to take part in the study. The final list of participants in the study was not identified by the researcher to anyone in the school in order to protect confidentiality. The building principal was informed that six individuals were chosen and agreed to participate in the study. The principal indicated her support in having teachers in her building participate in the study. While the principal was not directly informed as to who were the participants in the study she was

aware of when the researcher was in the building interviewing teachers, observing instruction, and observing weekly collaboration or building professional development.

The researcher did not have any past work experiences with the study participants. The researcher knew two of the study participants through working in the same district as a building principal in the past, but both of the participants were staff members in a building other than the researcher's building of employment.

The participants represented a range of ages, teaching experiences, and grade level assignments. There were five female participants and one male participant. In order to protect confidentiality, the names of the individual participants were changed for the purpose of the case study. Jane and Cassie were first year teachers and teachers new to the district. Jessie and LuAnn were first year teachers in the district but had each taught five or more years, and Brian and Lynn were veteran teachers who taught in the school district for five years or more.

Individual Participants

Jane, (First Grade Teacher)

Jane was a first year teacher who graduated from a four year college in the local urban community. She met the criteria of a first year teacher in the district. Her major in college was Elementary Education, with endorsements in Reading and Early Childhood Education. She had no prior experience with professional development during her college or student teaching experiences. She indicated to the researcher that she had a good understanding of the Iowa Teaching Standards (Iowa Department of Education,

2002b) and created a teaching portfolio while in college that addressed the Iowa Teaching Standards. She did not serve on any district or building leadership committees.

Cassie, (Art Instructor-Kindergarten through Fifth Grade)

Cassie was a first year teacher in the district. She had no prior teaching experience other than through student teaching. She completed her student teaching the previous year at Great Plains Elementary School. Cassie met the study criteria of a beginning teacher new to the district. Cassie graduated from a university located 40 miles from Great Plains Elementary School. Her major was in Elementary Art Education. She indicated that she had some experience with professional development through her student teaching experience at Great Plains Elementary School. She felt she had a good understanding of the Iowa Teaching Standards and was working on her teaching portfolio as a new teacher. Cassie did not serve on any district or building leadership committees.

LuAnn, (First Grade Teacher)

LuAnn worked as an elementary teacher for seven years. She was in her first year of teaching at Great Plains Elementary School. Prior to coming to Great Plains she taught in another state for several years. She graduated from a university in the western part of the United States with a major in Elementary Education and minors in Spanish, Early Childhood Education and English Language Learners Education. She did not indicate any prior experience with professional development and she shared that this was her first experience with the Iowa Professional Development Model (IPDM). She was becoming familiar with the Iowa Teaching Standards and was working on her teaching

portfolio as a district requirement for new teachers to the district. She did not serve on any district or building level committees.

Jessie, (Kindergarten Teacher)

Jessie had worked as an elementary teacher for eight years. She was in her first year of teaching at Great Plains Elementary School. Prior to teaching at Great Plains she was an Early Childhood teacher in another state. She was the early childhood training director and responsible for professional development planning and implementation with other early childhood teachers. Jessie graduated from a university in the eastern part of the United States. She graduated with a degree in Early Childhood Education. Jessie did not serve on any district or building committees. She too was working on her teaching portfolio focusing on the Iowa Teaching Standards as part of the district requirements for new teachers. She did not have any experience with the IPDM prior to coming to Great Plains Elementary School. She made the comment to this researcher that it was clear to her that at Great Plains Elementary School “collaboration is big.” She was not on any building leadership committees.

Lynn, (Second Grade Teacher)

Lynn was a teacher for 29 years. She taught 22 of those years at Great Plains School District. She had a B.A. degree in Elementary Education, Special Education and a Masters in Reading and Language Arts from a state university located approximately 70 miles from Great Plains Elementary School. She had knowledge of and participated in professional development for several years at Great Plains Elementary School. She served on the district Literacy and Social Studies Council. She was familiar with the

Iowa Teaching Standards and her Individual Professional Development Plan was aligned to the standards.

Brian, (Third Grade Teacher)

Brian was a teacher for nine years. His entire teaching experience had been in the Great Plains School District. He graduated from a state university approximately 70 miles from Great Plains Elementary School with a degree in Elementary Education and a minor in K-6 Mathematics. He served on several district and building level committees. These committees included the building lead learning team, district level curriculum team, and new teacher mentor. He had been actively involved in building level professional development for as long as he had been in the district. He stated that he “values the opportunities for professional learning and working collaboratively with his colleagues.”

Data Collection

The researcher believes it is important to see how separate pieces of information may converge to the same conclusions or themes. Therefore, multiple sets of data were collected from interviews, observations, lesson plans, and individual learning plans. Data was collected from each participant throughout the three month timeframe.

Data was collected through multiple methods. Qualitative research is inherently a multi-method, multi-dimensional approach. The use of triangulation is an attempt to gain an in-depth understanding of the identified research question. Denzin and Lincoln (2003) prefer to call this method of research “crystallization” rather than “triangulation.” They state that in postmodernist mixed-genre texts, “we do not triangulate; we crystallize”

(Denzin & Lincoln, 2003, p. 517). This researcher attempted to gain a deeper understanding of the effect of teacher collaboration on instructional practices by collecting data through interviews, observation and artifact analysis from six teachers with varying years of experience in and out of their current school setting. The collection of multiple types of data assisted the researcher to triangulate the data in order to identify consistent themes and sub-themes on the effects of weekly teacher collaboration on teacher instruction.

Description of Types of Data Collected For the Study

In order to understand the multitude of data collected as well as the sources of the data, it is important to have a clear picture of the types of processes that were in place at Great Plains School District that provided opportunities for teacher collaboration. Data from each of these areas was collected for the research study.

Weekly Teacher Collaboration

Weekly teacher collaboration occurred one morning each week prior to students starting their school day. Teachers met from 7:30-8:15 a.m. one day a week in the school library. Teachers met in grade level teams or in “specials” teams. The focus of these weekly teacher collaboration sessions was to discuss and plan the use of strategies to use that are aligned to the building action plan and that will positively impact student achievement. Additionally, this time was to be used for the purpose of analyzing student achievement data, scoring curriculum based formative assessments as needed, planning lessons aligned to the district and grade level team goals, and providing an opportunity to problem solve instructional issues that may have occurred since the last weekly

collaboration session. Moreover teachers were expected to attend these sessions prepared and ready to be engaged in discussion and planning with the team. Lastly, teams and individual teachers were expected to periodically record data and reflections in their web based individual professional learning plans.

Monthly Building Professional Development Sessions

Monthly building professional development sessions were for the purpose of providing whole building professional development aligned to the building and district professional development plan and goals. Attendance at monthly building professional development was required and was led by the building leadership team. The building leadership team was made up of the principal, building learning strategists, and several teachers who represented their grade level or grade level cluster. The building leadership team was responsible for planning the agenda for the monthly building professional development sessions. Agenda items included time for teachers to share experiences with lesson study activities, time for teachers or the leadership team to model a specific teaching strategy, and time for grade levels to analyze summative student achievement data and to record this data on building level student achievement data spreadsheets. Additionally, teachers were sometimes provided time in their classrooms for clerical work. This typically occurred in the afternoons of the building professional development day.

Teacher Lesson Plans

Teacher lesson plans were recorded on specific lesson plan templates that were either individual teacher created or developed by the grade level team of that particular

teacher. All submitted lesson plans included lesson objective or objectives, a description of the “moves” of the lesson, a description of student work aligned to the lesson and method or methods for monitoring student performance or objective acquisition. Each teacher in the study submitted written lessons for one month to the researcher.

Individual Teacher Professional Learning Plans

Teachers were required by the district and the building administration to develop a Professional Learning Plan (PLP). PLPs are developed in the fall of each school year and are based on classroom student achievement data as well as aligned to the building action plan. The PLP is written and submitted as a web based plan. Plans are available for viewing and comments by the building principal. Teachers at the building and district level may view each others’ plans but are not able to record comments on the secure web based plan. Teacher PLPs are not available to be viewed online by anyone outside of the district. Teachers submitted hard copies of their PLPs to the researcher.

Required components of the Professional Learning Plans were;

- Student achievement goal,
- Content standard being addressed in the goal,
- Student achievement data,
- Short term goals that are aligned with the end of the year student achievement goal,
- A description of teacher practices aligned to the student achievement goal,
- Teacher action plan,

- Evidence of practice as well as a description of the “Level of Use” of teaching strategies and practices,
- Data on student achievement as a result of implementation of the Professional Learning Plan, and
- Teacher reflections throughout the PLP process.

Again, the building principal reviewed the Professional Learning Plans periodically. Additionally, the building principal was able to add comments and feedback to the individual learning plans. Teachers updated their individual learning plans during weekly collaboration time and/or during monthly building professional development sessions.

Interview Data Collection

Interview methods were used to identify what effect teachers believed teacher collaboration had on their instructional practices. The six teachers were asked questions to identify the benefits of teacher collaboration, the challenges of teacher collaboration, and the effects of teacher collaboration on lesson planning, assessment, and instructional decision making. Additionally, teachers were asked what behaviors lead to effective teacher collaboration and what effect collaboration had on their own instructional practices. Member checks were used throughout the interview process in order to determine credibility and accuracy of the interview data.

Interviews were scheduled by appointment with the researcher. The interviews were conducted on-site at Great Plains Elementary School and took place in each of the

participant's classrooms where interviews could occur privately and with no interruptions.

Interview Protocol

The study included interviews as part of a case study approach to determine the effect of teacher collaboration on each teacher's instructional practices in the classroom. Each teacher was interviewed three times. The interviewer met individually with each teacher participant. Interview sessions varied in length based on the questions and participant responses. The interviewees were informed that the interviews would be kept confidential and that the participant's names and school would be changed in order to protect their identity.

A flexible interview protocol was developed using open ended questions in order to prompt responses from the participants. After the first set of interviews, interview questions were revised for the second and third interviews based on teacher responses to the initial interview questions. See Appendix B for interview protocol and Appendix C, D, E for interview questions that were asked during the three interview sessions.

The interview questions were field tested with two teachers. Both teachers taught in school districts other than Great Plains School District. One teacher was an elementary teacher and the other teacher was a middle school teacher. The field test teachers were asked to give feedback concerning the clarity of the questions as well as the content of the questions. The elementary teacher had experience with the Iowa Professional Development Model and building professional development. This individual indicated to the researcher that most questions were clear and elicited

reflection on her part as to how to answer the questions. However, she had little experience with teacher collaboration and therefore some questions needed to be restated in order for her to understand them more clearly. Additionally, she did not understand what was meant by the “building action plan” and therefore required further explanation from the researcher concerning this term.

The middle school teacher was a beginning teacher and had little experience with the Iowa Professional Development Model. This teacher shared that he wasn’t sure that most new teachers would know anything about building action plans or the research on teacher collaboration. However, the researcher decided to keep questions concerning the building action plan and research on teacher collaboration as a way of determining the level of involvement teachers have in building action plan development and building level discussions concerning teacher collaboration.

Two teachers were interviewed on the first day of conducting the interviews. This provided the researcher the opportunity to reflect on the interview protocol and teacher responses to questions and an opportunity to make changes if necessary to strengthen the process. The remaining four first interview sessions were completed the following day. The researcher scheduled the second and third interviews with each participant at the end of each of the preceding interviews. Each of these interview sessions were scheduled over the next two months in order to spread the interviews out over time. This allowed the teachers an opportunity to meet with their collaborative teams at least three times in between each interview session. Additionally, it allowed for at least one building level professional development session between each of the subsequent interviews.

The first set of interview questions served to help the researcher and participant get to know each other and learn about the participant's past and present experiences with teacher collaboration. The question that was most difficult for the new teachers to respond to was in regard to teacher collaboration. Teachers new to the district did not have experience with teacher collaboration during their student teaching experiences or in their previous teaching positions. The researcher clarified the meaning of questions or restated questions with any of the participants if the need arose.

Jessie and Cassie were observed as being quite nervous during the first interview session. They both expressed concern as to whether they were answering the questions appropriately or if the interviewer was expecting more from their answers. They asked the questions, "Am I doing alright?" or "Is there anything else that you want to know?" during the first interview sessions. The researcher assured both teachers that there were no right or wrong responses to the questions but rather the researcher was attempting to gain a depth of understanding about teacher collaborative practices and their perspectives on the unique aspects of teacher collaboration at Great Plains Elementary School.

Brian greeted the researcher at the door for the first interview. He shared that he was very excited about the opportunity to share his thoughts and wanted to help in any way he could with the research. He paused before answering questions and appeared to be reflecting on his responses before sharing them with the researcher. During the second interview session with Brian, his daughter was sitting in the classroom working quietly as he responded to the questions from the researcher. On one occasion his daughter came

over to listen to the conversation. She watched and listened for a few moments and then returned to a desk to continue her work.

Lynn, LuAnn, and Jane appeared relaxed during the interviews. They did not express any nervousness about the interviews and were very open in their responses. LuAnn and Jane were on the same grade level team and each shared some of their frustrations and concerns about their team and one particular team member. They did not feel that this particular individual was as open to collaboration as the rest of the team. The concern about the team member came up in each of the subsequent interviews with Jane. LuAnn did not bring up her concerns about the team member again after the first interview.

Lynn appeared to be most comfortable and relaxed during the interviews. She was open in her responses to the questions. During the third interview she shared with the researcher that she felt that being part of the study was a good experience for her. She shared that she hadn't necessarily reflected on collaboration in the past and the interviews gave her an opportunity to think about what she valued in teacher collaboration as well as some of the challenges that she experienced with teacher collaboration.

Observation Data Collection

Observation methods were also part of the data collection process. Observations took place during building and district professional development, weekly collaboration time, and in each of the teacher's classrooms during instruction. The observations served to further reinforce the themes that came forward during the individual teacher interviews. The observations helped to identify specific characteristics and behaviors

during teacher collaboration that effect teacher instructional practices. Additionally, the classroom observations helped to determine what effect weekly collaboration had on instructional practices in the classroom and the frequency in which lessons taught aligned to the work that took place during teacher collaboration time.

Professional Development/Collaboration Observation Protocol

The researcher observed three building level professional development sessions and three weekly collaboration sessions that included the participants in the study. The building professional development observations were done over three months with one observation occurring each month. Each observation was for at least a half day. One observation included grade level teachers from the other three elementary buildings in the district. Whole district grade level meetings were built into the professional development schedule during the spring of the previous school year. The researcher did not participate in the discussions or activities during the professional development sessions. She served strictly as an observer during these sessions. The researcher sat within close proximity of the team in order to clearly hear the conversations.

The observations occurred in the participants' natural setting. That is, building professional development and weekly collaboration observations took place in the Great Plains Elementary school media center. Location for building professional development and weekly collaboration was determined in the spring of the prior school year by the building leadership team which was comprised of the principal and five teachers. The media center was a large room that had several seating areas within the room in which teams could use for their team collaboration. There was a seating area available for each

team to meet in the media center. At the front of the room there was an electronic projector screen that was used for large group sharing and presentations.

Most social scientists have long recognized the possibility of the observer's affecting what he or she observes, but careful researchers are nonetheless supposed to adhere to rigorous standards of objective reporting designed to overcome that potential bias (Denzin & Lincoln, 2003, p. 108).

Therefore, this researcher took great strides to remain as unobtrusive as possible during each observation session. The researcher sat in close proximity to the activities and conversations taking place during the collaboration and professional development sessions. The physical location of the researcher was somewhat removed from the group in order to not appear as part of the activity or conversation. However, it was important for the researcher to be located close enough to closely observe participant behaviors and to hear conversations taking place among the participants and their colleagues.

The researcher recorded data from observations in the form of field notes during the professional development sessions and teacher collaboration sessions. The researcher recorded activities, events, conversations, and themes during the observations. Field notes were reviewed after each observation in order to clarify and record additional notes for the purpose of future analysis. Additionally, each session was audio recorded by the researcher. The purpose of the audio recording was to enable the researcher to go back and compare field notes with the audiotapes and transcriptions. The researcher also recorded descriptions of the setting for each professional development session, number of participants, seating arrangements and behaviors during collaboration and professional development. Lastly, the researcher collected data on the frequency of interactions initiated from the study participants in each of their grade level or content area groups.

Classroom Instruction Observations

The researcher observed each teacher participant one time during classroom instruction. Each observation was for a minimum of 15 minutes. Each teacher was asked to provide a copy of his/her lesson plan for the lesson that was being observed by the researcher. The researcher was located in an area of the classroom that was designated by the teacher as being the best location for observation of the lesson. This was typically in close proximity to the students but far enough away that the researcher was not a distraction to a student or students. Prior to each observation session, the teacher introduced the researcher to the students and shared with them the reason for the visitor in their classroom. The students were then expected to return their attention to the teacher and his/her instruction.

Data was collected through field notes during the classroom observations and from teacher lesson plans for the lessons observed by the researcher. Additionally, each classroom observation session was videotaped by the researcher. The purpose of the videotaping was to provide the researcher the opportunity to compare field notes with actual video of the lesson. Recorded notes included teacher/ student interactions, lesson protocol or process, and link of the lesson to the previously observed teacher collaboration session. Additionally, student response and a description of the classroom setting were also recorded. Teacher lesson plans were collected in order to compare the written planned lesson to the observed lesson. Lesson plans were analyzed to determine connection to teacher collaboration lesson planning that had been observed by the researcher as well as to identify links to the themes that surfaced throughout the teacher

interviews. Again, the researcher collected these multiple types of data in order to triangulate or crystallize the themes and sub-themes that surfaced during teacher interviews.

Teacher Lesson Plans and Professional Learning Plans (PLP) Data Collection

Lastly, teacher lesson plans and Professional Learning Plans (PLP) were collected as part of the study to identify the correlation between teacher collaboration and the planning of lessons. Each teacher was asked to provide one month of lesson plans to the researcher. The teachers were asked to make copies of their lessons from their lesson plan books. Lesson plans that were copied from the lesson plan books were brief and described lessons in general terms. Lessons recorded in the lesson plan books indicated content area, the name of the lesson, lesson objective, teacher actions, student learning expectations, and a brief statement of a follow up assignment or assessment.

Study participants were asked to provide a copy of their individual Professional Learning Plan (PLP) to the researcher. The researcher analyzed this data in order to look for evidence of teacher instructional practices being affected by the teacher's individual Professional Learning Plans and weekly collaboration. Additionally, artifacts were analyzed in order to determine connections to how teachers described the lesson planning process that took place during grade level lesson study processes. The researcher attempted to determine if there were consistencies in what the teachers taught with what teachers said they planned with their teams and taught in their classrooms. Teachers at Great Plains Elementary School were expected to construct professional learning plans yearly that were aligned to their team goals for student achievement and instruction.

There was time set aside during each collaboration session for teachers to record notes from their collaboration session into their individual plans. Therefore, the researcher was able to review and analyze these notes in order to look for connections to instructional practices and teacher collaboration.

Additionally, the researcher requested a copy of the building action plan and outline for professional development sessions for the school year. This assisted the researcher in determining if there was evidence of the building action plan in individual teacher learning plans, lesson plans, monthly professional development sessions, and weekly collaboration sessions. The collection of these artifacts assisted the researcher to continue to solidify and identify consistent themes and sub-themes on the effect of teacher collaboration on instructional practices in the classroom.

Data Collection Timeframe

Each teacher was interviewed three times with at least one month in between each interview session. This allowed the researcher the opportunity to observe at least one weekly collaboration session and one building professional development session in between each interview. Weekly collaboration sessions took place one morning each week for 40 minutes in the Great Plains Elementary media center. The researcher was able to observe each grade level team for each participant at least once each month either during grade level collaboration or building professional development time that included team collaboration. Building professional development sessions occurred either at Great Plains Elementary School or at one of the other elementary buildings in the district. Monthly professional development sessions were scheduled as whole day sessions. The

researcher attended three whole day building professional development sessions during the case study timeframe. On two occasions, weekly teacher collaboration occurred as part of the monthly building professional development session.

Classroom observations occurred during the second and third months of the study. Each teacher was observed teaching a lesson one time during the case study time period. The researcher videotaped the classroom observations while also taking field notes during the observation period. Each classroom observation ranged from 15-30 minutes in length.

Table 1

Study Timeframe

Teacher Interviews	Building Prof. Development	Weekly Collaboration	Classroom Observation
Six teachers interviewed in the first month of the study	One session during the first month of the study	Three weekly collaborations the first month of the study	
Six teachers interviewed in the second month of the study	One session during the second month of the study	Two weekly collaborations in the second month of the study (One session was included as part of the monthly building professional development.)	Three teacher classroom observations during the second month of the study (teacher lesson plans collected at the time of the observations)
Six teachers interviewed in third month of the study	One session during the third month of the study	Two weekly collaborations in the third month of the study (One session was included as part of the monthly building professional development.)	Three classroom observations during the third month of the study (teacher lesson plans collected at the time of the observations)

The researcher gained permission to complete this study from the Superintendent of Schools of the Great Plains School District. (See Appendix F.) Additionally, the University of Northern Iowa's Institutional Review Board granted permission to conduct this study. The names of the school, district, and participants have been changed in order to protect the identity of the participants.

Data Analysis

Case studies using the constant comparison method require an ongoing analysis of the data as it is collected by the researcher. Data analysis included (a) the data collected from the transcripts of the audio-taped interviews, (b) observational data collected through field notes during observations of professional development, teacher collaboration, and classroom instruction, (c) video tapes of lessons taught in the classroom, and (d) data collected from teacher artifacts. The research questions for this study directed the analysis of data. The collected data was systematically arranged and reviewed for recurring categories, themes, subthemes, and perspectives.

The data collection for this study was ongoing. As the data was collected, the researcher looked for key issues and categories, recurrent themes, and perspectives. Additionally, particular attention was paid to the diversity of the dimensions within these key issues, themes and perspectives. This was particularly important given that the participants in the study have varying experiences, background knowledge and tenure in the district. Bogdan and Biklen (1998) refer to five steps in the constant comparative method that assists in theory development. They are;

1. Begin collecting data. Look for key issues, recurrent events, or activities in the data that become categories of focus.
2. Collect data that provide many incidents of the categories of focus, with an eye to seeing the diversity of the dimensions under the categories.
3. Write about the categories you are exploring, attempting to describe and account for all incidents you have in your data while continually searching for new incidents.
4. Work with the data and emerging model to discover basic social processes and relationships.
5. Engage in sampling, coding, and writing as the analysis focuses on the core categories. (p. 67)

The researcher analyzed the data by identifying key issues, categories, and recurrent themes from the data sources. Data from the observations and artifacts were analyzed in order to determine if these data sources supported or reinforced the themes and sub-themes that were identified through the analysis of the teacher interviews. The interviews were the first to be analyzed for recurrent categories, themes and sub-themes. The initial analysis of the interviews included identifying the issues or categories on chart paper. Next, supporting data from the teacher observations, observations of collaboration and professional development, and teacher artifacts were analyzed in order to determine where or how the data supported the teacher interview categories, themes and sub-themes. After each subsequent interview, categories, themes and sub-themes were checked and rechecked to see if the same categories and themes were occurring or if new

categories, themes or sub-themes needed to be added to the chart papers. Through the interviews and observations, initial categories and themes were continuously compared with previous events and statements in order to allow for different categories, themes and relationships to emerge within the data. The constant comparative process of data analysis allows for identification of reoccurrence of ongoing categories, themes and sub-themes. Moreover, by having a multi-method, multi-dimensional approach for data collection which included data collection from interviews, observations and artifacts, the researcher was able to gain a deeper understanding of the categories, themes, relationships, and issues contained within this study.

Interview Data Analysis

According to Patton (1990, p. 376), “The first decision to be made in analyzing interviews is whether to begin with case analysis or cross-case analysis.” A cross-case analysis was used for the interviews, using the constant comparison method. The purpose of using the constant comparison method was to group answers to questions and to analyze the different perspectives on central categories, themes and perspectives. Additionally, the researcher was interested in using the cross-case analysis in order to determine if there was a difference in response to open ended questions and lesson plan development based on individual teacher’s level of experience in the district. It was also important to determine if there were differences in categories, themes and perspectives based on each teacher’s collaborative team makeup. Notes were made next to each statement posted on the charts indicating if the statement was made by a new teacher, a new teacher to the district or a veteran teacher. This was done in order to determine if

certain categories, themes and perspectives emerged more frequently based on the experience level of the teacher in the district or if the statement was made by a new teacher.

Glaser and Strauss (cited in Lincoln & Guba, 1985, p.339) describe the constant comparison method as following four stages. They are:

1. Comparing incidents applicable to each category,
2. integrating categories and their properties,
3. delimiting the theory, and
4. writing the theory. (p. 339)

Interviews were audio recorded by the researcher. Additionally, the researcher took written notes during the interviews on an interview protocol sheet. The researcher recorded possible follow up questions or clarifying questions during the interviews. Notes concerning participant body language or observations of the participant and the classroom were noted on the interview protocol sheet. These field notes also provided an opportunity for the researcher to cross check written notes with the audio recordings and transcripts. The data from the interviews were analyzed for themes and characteristics of collaboration experiences for each of the participants. Additionally, themes were analyzed in order to determine if there was a difference or variation in themes among the teachers who were less experienced versus more experienced teachers in and out of the school district. Lastly, analysis focused on effective processes and behaviors during teacher collaboration. The researcher used member checks at the end of each interview

in order to determine the accuracy of the data and to give the participants an opportunity to add or clarify comments made during the interview.

Observational Data Analysis

Observational data was collected during weekly collaboration sessions, monthly building professional development sessions, and teacher lesson observations.

Observations were audio recorded and video recorded in order to go back and compare field notes with audio transcriptions and video observations. For instance, field notes for teacher lesson observations were analyzed by comparing field notes to video notes made after reviewing video recordings of lessons taught by teachers. This served to make sure that all audio from the observations was recorded and analyzed by the researcher.

Analysis included reviewing student response to the lesson, teacher interactions with students, and connection of the lesson to teacher collaboration lesson planning. Next, the researcher analyzed the data in order to determine how the data supported or did not support each of the categories, themes and sub-themes that surfaced through the teacher interviews. For example, the two first grade teachers shared during interviews with the researcher that their team had been working on creating lessons using distributive practice for math instruction. For each of these teacher's lesson observations, the teachers were observed using distributive practice in order to teach money concepts. The observation supported what the teachers shared with the researcher regarding how developing lessons together benefited them as new teachers in the district.

Field notes collected from weekly teacher collaboration were analyzed by comparing audio tape transcriptions to field notes taken during the individual weekly

collaboration sessions. Field notes were coded for emerging categories, themes, sub-themes and teacher interactions during weekly collaboration. The physical setting of teacher collaboration and building professional development was analyzed by reviewing and coding descriptive notes of the setting. Study participant behaviors were also recorded and analyzed in order to determine how engaged participants were with their teams and the collaborative process. This data was coded under the emerging teacher interview categories, themes and sub-themes in order to continually compare the observational data to the teacher interview data. By using the constant comparative process, categories, themes and sub-themes became more evident and were consistently supported by the multiple sets of data collected through observations.

Teacher Artifact Analysis

Teacher artifacts which included teacher lesson plans and teacher PLPs were analyzed in order to determine the link between the lessons taught and the study and dialogue that took place during teacher collaboration and professional development. Lesson plans were coded under the emerging categories, themes and sub-themes that were identified through the coding of teacher interviews and observations. Additionally, these artifacts were analyzed to determine the link between the lessons taught, what the teachers said they taught or focused on for their PLPs, and the study and dialogue that took place during teacher collaboration time and professional development. Lessons were analyzed to determine if they were aligned to the teacher's individual professional learning plans. The analysis of teacher artifacts was merged with the coding that was done with the analysis of the teacher interviews and observations for two reasons. First,

to determine if new categories, themes or sub-themes emerged from the analysis of the artifacts or secondly if they served to support and crystallize the categories, themes and sub-themes that had already been identified through the teacher interviews and observations.

Initial Categories and Themes

The first step in the data analysis was to reduce code and display the major categories, themes, issues and relationships from the data. Each participant was interviewed three times. A total of eighteen interviews were transcribed by the researcher. Audiotapes from the professional development sessions and weekly collaboration sessions were also transcribed by the researcher. The transcription of the audiotapes allowed the opportunity for the researcher to begin familiarization with the data. Once interview transcriptions were complete, the researcher read each transcript and began to code the individual teacher's comments from the interviews. Coding was done by using a color coding process in order to identify general categories and themes. Once the general categories were identified, each coded item was looked at separately. General categories were written on large chart paper with each subsequent theme included under the general categories. If new themes emerged, they continued to be included under the specific categories.

The initial coding of the transcripts resulted in two large categories. These were (1) teacher and student learning and (2) socialization/culture. From there as the researcher continued to code the data more defined categories emerged which expanded the initial number of categories from two general categories to three categories. The

initial categories of teacher and student learning were further defined by naming the one category as two; teacher learning and student learning. From there, themes emerged that fit under each of the primary categories. These were the themes of benefits of teacher learning, benefits of student learning, and benefits of socialization/culture and barriers to teacher learning, barriers to student learning, and barriers to socialization/culture. Lastly, with each theme there were several sub-themes that were uncovered as the data was coded and analyzed by the researcher.

Next, the researcher coded the observations of the professional development and collaboration sessions to determine alignment to the categories that were identified in the teacher interviews. As the researcher coded the lesson observations, it became evident that observational data did not support all of the themes. For example, the themes of benefits and barriers to socialization/culture were not supported through lesson observational data but were supported consistently by the teacher interview data as well as teacher collaboration observational data. Teacher collaboration observational data was coded under the themes of benefits and barriers to teacher learning, benefits and barriers to student learning, and benefits and barriers to socialization/culture.

Teacher artifacts which included teacher lesson plans and individual professional learning plans were also coded in order to determine where or if they fit within the general categories and themes. These artifacts were analyzed to determine the link between the lessons taught, what the teachers indicated they taught, and the study and dialogue that took place during teacher collaboration time and professional development. Additionally, the lessons were analyzed to determine if they were aligned to the teacher's

individual professional learning plan goals that were recorded in their PLPs as well as shared with the researcher during the teacher interviews.

The following table indicates the structure for defining and identifying the general categories, themes, sub-themes, key words, participant responses, and teacher collaboration focus.

Table 2

General Categories, Themes, Sub-Themes, Key Words, Participant Responses and Collaboration Focus

General Category	Theme	Sub-Themes	Key Words	Sample Participant Response	Sample Teacher Collaboration Focus

The continuous analysis and constant comparison process identified data overlap occurrences within the categories and themes. Sub-themes continued to emerge or were solidified throughout the analysis of data from interviews, observations, and teacher artifacts. Some data that was collected through field notes and audio transcriptions was not included in the analysis as it did not fit with the research question. These were comments made by teachers that were off topic or about non school related activities, experiences and contacts.

Through the analysis, themes became more clearly defined as additional information from interviews, observations, and artifact analysis was collected. For

example, as study participants became more comfortable or relaxed with the researcher, they shared more specific information in regard to how individuals within their teams interacted with each other, the frequency and intensity of principal involvement with their collaborative teams, and barriers they were facing in regard to time management and district expectations.

The researcher analyzed the initial themes and redefined sub-themes as new data was acquired through subsequent interviews, observations, and teacher artifacts. Making use of data from multiple perspectives and multiple settings or situations provided the opportunity for the researcher to account for recurrences or patterns within the data while identifying new sub-themes. The researcher also looked for comparisons or differences in the data collected from interviews versus through observation and analysis of teacher artifacts. Reflective analysis was used when comparing the data from the various sources. Reflective analysis is characterized through deep, reflective thought of the data. The researcher relied on intuition and judgment in order to evaluate what is being studied. Reflective analysis is suitable for thick descriptions and in identifying themes and patterns within the data (Gall, Borg, & Gall, 1996). The researcher used reflective analysis particularly when analyzing study participant responses to open ended interview questions and when analyzing the participant's written reflections in their individual professional learning plans. Reflective analysis assisted this researcher in taking a deeper view of what and how information was shared from each of the study participants and to determine how their reflections about teacher collaboration were possibly aligned to the

researcher's analysis of classroom observations, collaboration observations and teacher artifacts.

As data was continuously analyzed the researcher was able to identify specific categories and themes that emerged from the data.

The identified categories, themes, and their definitions were:

1. Teacher learning: Data that indicated teacher learning of strategies, teacher reflections on their own learning, lesson plan development, and learning from others.

a. Benefits to teacher learning: Identification of processes, procedures, experiences and learning that positively affected the learning of individual and/or groups of teachers.

b. Barriers to teacher learning: Processes, procedures, experiences and expectations that were barriers or presented challenges to teacher learning.

2. Student learning: Links between student learning and teacher collaboration on student achievement and skill acquisition. This included the discussion of the analysis of student data, discussion on student learning, and student response to lessons taught by the teacher.

a. Benefits to student learning: Positive effects of collaboration on student learning and student achievement.

b. Barriers to student learning: Processes, procedures, and behaviors that presented barriers to student learning.

3. Socialization/Culture: Teacher interactions with each other (professional and personal interactions) and teacher reflections during interviews on grade level or content area team collaboration.

- a. Benefits to socialization/culture: Positive effects of teacher collaboration on teacher interactions, socialization and culture building in the team and/or at the building level.
- b. Barriers to socialization/culture: Processes, procedures and behaviors that were barriers or presented challenges to positive socialization/culture building.

It was important to include a cross check of the data analysis. Therefore, the researcher requested that another qualitative researcher review and code the data. The coded data was reviewed and coded by another qualitative researcher in order to determine confidence in and refinement of the identified categories and themes. To begin this process, the researcher identified the specific categories and themes that emerged from the data. Initially, the researcher identified two large categories and several themes from the data. Additionally, each of the categories and themes was specifically defined for the other qualitative researcher in order for both researchers to have a clear understanding of the definition of each category and theme.

The researcher and second coder then practiced coding through brief coding exercises; beginning with the first set of teacher interview data. Periodically throughout the coding practice, the researcher and second coder compared their work to determine consistency in coding data. Lastly, the second coder coded data independently and the

researcher determined a 90% level of agreement in coding between the researcher and the second coder. The researcher and second coder continued this process with the remaining teacher interview data, observational data, and teacher artifact data. Periodically the researcher and second coder paused to compare results of the coding; continuing to have consistent alignment to the identified categories, themes and sub-themes. The researcher and second coder worked through the coding process during several coding sessions due to the large amount of data that was collected as part of the case study. Additionally, the cross check data analysis and coding practice process took place twice during the study. The first set of coding sessions took place after the initial collection of the data from teacher interviews, observational data, and teacher artifacts. The second coding process and reliability check occurred after further refinement of the data took place while the researcher was in the process of writing the results of the case study. The purpose of the second cross check analysis process was to determine if both coders identified consistent alignment of the interview data to three general categories and two consistent themes within each of these categories.

This reliability check process achieved a consistent alignment to the researcher's second set of identified categories and themes. Categories and themes that emerged throughout the data collection and analysis aligned with the researcher's literature review. As the data was collected and the themes emerged, the researcher identified specific sub-themes and key words for each of the themes. Table 3 summarizes the categories, themes and sub-themes. Additionally, it defines each of the categories and provides examples of

participant responses as well as sample teacher collaboration foci aligned to the identified categories, themes and sub-themes.

Table 3

Identified Categories and Themes and Definitions, Sub-Themes, Key Words, Sample Participant Responses, and Sample Teacher Collaboration Focus

Category	Themes	Sub-Themes	Key Words	Sample Participant Response	Sample Teacher Collaboration Focus
Teacher Learning Indications of teachers implementing strategies, reflective practice, lesson plan development, and learning from others	Benefits to Teacher Learning	Connectedness and Collegiality, Improved Instructional Practices, Lesson Study, Teaching Strategies, Learning from Others	"Part of the team," "learning from my team," "exciting," "Doing what is research based and not just what is fun to do."	"Weekly collaboration is my guiding light to lesson planning." "I love the idea of being able to bounce ideas off of another colleague."	Team lesson study Team developing a behavior rubric for students in specials classes Teams reading and studying research articles on best practices in reading comprehension instruction
	Barriers to Teacher Learning	New Team Members, Team Focus, Teacher Autonomy, Required Documentation, Time of Day and Frequency of Collaboration		"One team member doesn't include us." "This is hard work."	

(table continues)

Category	Themes	Sub-Themes	Key Words	Sample Participant Response	Sample Teacher Collaboration Focus
<p>Student Learning</p> <p>Student achievement and student skill acquisition</p>	<p>Benefits to Student Learning</p> <p>Barriers to Student Learning</p>	<p>Collective Teacher Knowledge Base, Consistent Grade Level Expectations, Student Achievement, Strategy Learning</p> <p>Competing Expectations for Teachers Which Affected Instructional Time with Students</p>	<p>“student achievement,” “writing scores,” “think alouds”</p>	<p>“I think the kids are coming to me from first grade talking reading comprehension since we are all using the same action plan and we all are focused on reading comprehension and writing...”</p> <p>“They’ve had some background which makes it easier for me. I can take it a little deeper.”</p> <p>“I had to finish my PWIM cycle with students before I had planned so that I could turn in my implementation data on time.”</p>	<p>Reading strategies lesson plans</p> <p>Math lessons using distributive practice</p> <p>Student achievement results recorded on teacher learning plans</p>
<p>Socialization/ Culture</p> <p>Teacher interactions as part of teacher collaboration</p>	<p>Benefits to Social./Culture</p> <p>Barriers to Social./Culture</p>	<p>Interpersonal Relationships, Taking Risks, Principal Leadership</p> <p>Taking Risks, Interpersonal Relationships, Location of Collaboration</p>	<p>“Honesty,” “push our team outside of the comfort zone,” “sharing”</p>		<p>Warm up activity during grade level collaboration time.</p> <p>Sharing of activities during a district grade level collaboration session.</p>

The researcher found that some teacher comments from interviews did not align to specific collaboration foci but were more reflective comments. These included statements that focused on advice for collaboration, leadership focus and hopes for the future. Study participants frequently shared their reflections in regard to structures of collaboration and how effectively their team worked together. This became more evident as the participants became more comfortable with the researcher. For instance, one study participant said, “Since I know this won’t be shared with anyone here, I think.....” This response was not in regard to a question but an added reflection on the part of the teacher.

Additionally, there were times where parts of data appeared to overlap along other identified themes. Key words or comments helped the researcher to determine which category and theme to categorize the data.

Establishing Trustworthiness

The basic issue in relation to trustworthiness is simple: How can an inquirer persuade his or her audiences (including self) that the findings of an inquiry are worth paying attention to, worth taking account of? (Lincoln & Guba, 1985, p. 290).

Lincoln and Guba (1985) encourage the use of the following four criteria for establishing trustworthiness of a qualitative study: credibility, dependability, transferability, and confirmability. This study used the constant comparative method in data collection, analysis, and interpretation in order to establish trustworthiness.

Credibility

Lincoln and Guba (1985) state that a major trustworthiness criterion is credibility. One method of establishing credibility is through prolonged engagement in the study and data collection. The study took place over a three month period. This allowed the

researcher to have a better understanding of the building and learning culture.

Additionally, through prolonged study, trust was built between the researcher and the participants in the study. Moreover, the case study used triangulation; having multiple sources of data and multiple methods for acquiring data.

Member checks during and after interviews were completed in order to establish credibility. It is important to check the accuracy of the data by those that are supplying the data “since *they* provided the constructions of which the investigator’s findings and interpretations are reconstructions, it is *they* who must find reconstructions credible.” (Lincoln & Guba, 1985, p. 328). During and after each interview, the researcher summarized what she believed she heard during the interview and offered an opportunity for each participant to clarify or expand on what he/she had shared during the interview experience. The researcher also informed each participant to feel free to contact the researcher if they had additional thoughts and reflections they wanted to share as a follow up to each interview.

Dependability and Confirmability

An audit trail was used in this study in order to document the case study process. “An inquiry audit cannot be conducted without a residue of records stemming from the inquiry, just as a fiscal audit cannot be conducted without a residue of records for the business transactions involved.” (Lincoln & Guba, 1985, p. 319). The audit trail consisted of raw data, data reduction and analysis, data reconstruction, process notes, and instrument development information. Raw data included video and audio recordings as well as field notes. Data reduction and analysis include the write up of the field notes and

audio and video transcriptions. Data reconstruction consisted of the structuring of themes and sub-themes; including the conclusions made through interpretation of these themes and sub-themes. Process notes were reflections that the researcher made following observations of weekly collaboration sessions and monthly professional development. The interview protocol, e-mail communications, and interview and observation schedules were part of the methodology development information.

Transferability

Transferability refers to the possibility or potential for which the findings of the study can be transferred to another situation. However, it is “*not* the naturalist’s task to provide an *index* of transferability; it *is* his or her responsibility to provide the *data base* that makes transferability judgments possible on the part of the potential appliers” (Lincoln & Guba, 1985, p. 316). The thick and rich descriptions in this study allow others the opportunity to make judgments in regard to the transferability of the study’s findings to similar situations.

Protection of Human Rights

The Human Participant’s Review Application was submitted to the Institutional Review Board (IRB) at the University of Northern Iowa. As indicated earlier, the participation in the study was voluntary and participants were told they could withdraw at anytime during the study duration. The participants were also provided written informed consent (see Appendix G). This provided information to the participants that explained the purpose of the study as well as what would be asked of them as part of the study. Participants were also asked to sign a release to be video and audio recorded and were

informed how the information gathered from the video tapes and audio tapes would be used in the study (see Appendix H). Potential risks to the participants were minimal and included the time commitment for participating in the study and the possible inconvenience of meeting with the researcher at several points throughout the study. Anonymity and confidentiality were made certain by not releasing the names of the individuals participating in the study nor the district or building in which they are employed. Additionally, the names of the participants, school, and district were changed in the published study in order to protect confidentiality.

Summary

This chapter provided information on how participants for the study were selected and a brief description of each study participant. Additionally, it specifically outlined the process and methods for collecting data for the study, the emerging categories, themes and sub-themes that were identified in the study and how each of the data sources was analyzed in order to crystallize each of the categories, themes and sub-themes. Methods for triangulating the data were also specifically outlined in this chapter. Lastly, the chapter addressed the methods used in this study in order to establish trustworthiness of the study as well as how confidentiality was established and maintained for study participants and their school district.

CHAPTER IV

RESULTS AND DISCUSSIONS

Introduction

There were two research questions for this study.

1. What effect does weekly teacher collaboration have on teacher instructional practices in the classroom?
2. Are there differences in teacher perceptions on impact of weekly teacher collaboration?

The analysis, synthesis, and evaluation of the data resulted in the identification of three specific categories that addressed teacher collaboration. The categories were as follows: teacher learning, student learning, and socialization/culture. The analysis of the teacher interview data identified the three categories. Additional data collected from teacher observations, observations of teacher collaboration, lesson plans, and PLPs provided supporting evidence and confirmation of the three categories and their supporting themes. Supporting themes for each category were the benefits and barriers to teacher learning, student learning and socialization/culture. Lastly, several sub-themes emerged under each of the identified themes that provided further clarity to each of the identified categories and themes.

Teacher Learning

The literature is very clear in identifying a major benefit of teacher collaboration as being expanded teacher learning. By working together collaboratively, veteran teachers are able to gain a renewed sense of energy and enthusiasm for teaching and

learning. New teachers have the opportunity to learn from more experienced teachers. Teachers who work collaboratively have the opportunity to collectively identify student learning problems, instructional issues and to learn more about the curriculum and content of teaching.

The Benefits to Teacher Learning

Participants in the study identified a sense of connectedness with colleagues as a major benefit of teacher collaboration. Additionally, a sense of improved instructional practices as a result of lesson collaboration was identified as a benefit by all participants. Moreover, all participants indicated that having everyone on the team with a common focus kept “everyone on the same page” and assured that teachers were teaching the same things and that students transitioned to the next grade level with common learning experiences, strategy focus and curriculum content. Lastly, all study participants indicated that they believed there was a positive effect on student achievement as a result of collaborative practices.

Teacher Connectedness and Collegiality

Teacher connectedness and collegiality was a major sub-theme of the benefits of teacher collaborative learning. Jessie, a first year teacher in the district shared that there was a sense of teacher job satisfaction as a result of teachers learning together. Teachers shared ideas with each other and planned lessons together. Veteran teachers directly supported those who were new to the district by providing direction and guidance in the areas of grade level expectations, implementation of research based practices, and lesson planning. Jessie also indicated that because of the opportunities for teacher collaboration,

it was an easier transition for her. She felt supported by her peers and felt a strong sense of collegiality.

I was assigned a professional partner. I have a professional partner who is on my grade level. It's been excellent. That person is really the go to person for anything whether it is curriculum related, school related, procedure related, or anything like that. She has just been great.

Jane, a first year teacher new to the profession also identified several benefits of teacher collaborative learning. Jane indicated during interviews that she felt requiring teacher collaboration and teacher collaboration time, encouraged teachers to be more professional. She also felt that it provided teachers the opportunity to share ideas and different perspectives. Connecting with her teammates assisted her in her learning and provided opportunities for her to learn about her new position with direct support from her colleagues.

There is lots of collaboration here and learning time. I guess to be completely honest, I think there are good sides and it has its weaknesses too. I mean in the past when I student taught, it wasn't that meaningful. But now it seems like we have so much time and new learning that we can work together as a team to figure out new strategies. We think about how things apply to our grade level. I feel like I learned a lot compared to student teaching even compared to my friend teachers. I've had so much taken in...It's awesome because I wouldn't have gotten that anywhere else.

Cassie a new teacher to the profession and an art teacher who does not participate in grade level collaboration but in "specials teachers" collaboration also identified several benefits to her as a new teacher. Cassie stated in an interview that it "allowed me to warm up to the district" and "gave me new ideas, professional friends."

Brian, a veteran teacher who has taught in the district for several years shared the following when discussing teacher connectedness:

It's just the contact with one another that's...able to share thoughts. Some of the great things you really feel a part of the school, because it's our mission statement, it's our seven teachers working together. It's a really nice community. I think we have got some very driven people. We have a lot of people that care about the kids that are here. And we have got a lot of different people with some varying strengths, which I think if you can pull some people that have technology strengths, and character strengths, and curricular strengths and teaching and that sort of thing can get some of those ideas developed.

Lynn, a veteran teacher who has taught for 29 years and has participated in a number of district and building initiatives shared how collaborative building practices in the past compared to the current collaborative practices in the building.

I think collaboration is really good. In the old days we used to call it study group or book club. We get together at somebody's house with social learning. It's nice to have something like that going. I like that and I think everybody likes that. Although, like I said, sometimes we need more time to discuss what we need for the next meeting. It's not perfect but...I don't know. This has been a good discussion for me. We don't really get to talk about this as a whole building. Also looking at the stress of teachers if we're so stressed out I don't know how good we're going to be for the kids.

Improved Instructional Practices

Garmston and Wellman (2003) found that schools that were considered to be most successful were those in which teachers worked interdependently with each other.

Students benefit from collaboration by teachers working collectively and sharing their expertise with each other rather than working in isolation. Teacher collaboration allows for knowledge exploration and encourages teachers to be active participants in research.

Brian perceived the collective sharing of knowledge as having a significant impact on instructional practices. During the second interview Brian stated,

I feel our team is functioning where our whole is greater than the sum of our parts. If time is used wisely in teams and if teams are working together you can function at a higher level. Self reflection is part of the team. I think that the research would say that those teams that are reflective are higher performing

teams. It is only going to positively impact your instruction because you are taking what you are learning and what you are experiencing and implementing that.

Additionally, three of the study participants made specific comments in their Professional Learning Plans regarding the benefits of working collaboratively with lesson development and strategies practice. Lynn and Brian, both veteran teachers reflected in their PLPs on how their grade level teams were focusing on specific teaching strategies during grade level collaboration. Lynn stated,

Our team learned about the lesson study process via a lesson study on asking questions. As a result of our work together, we not only learned more about question and answer relationships but also how to implement the strategy in a quality way with students. Our revisions of the lesson included boosting student engagement with the strategy. We learned things from this lesson study that we can apply to other lessons we do in the future such as giving students more application time in partners or small groups with the strategy. Students benefited from our work as now questions are popping out of their heads like crazy as we read books together in large and small groups and hopefully as they read silently by themselves and at home.

Brian shared that during collaboration time his team will focus on writing strategies. Additionally he reflected that as a team they will implement effective writing strategies that include the Composing Think Aloud strategy as well as Explicit Direct Instruction strategies. Moreover, he shared that by implementing and studying their practices as a team, the team's learning will increase and instructional practices will improve as a result of their learning.

Cassie, a first year art teacher, indicated in her first interview that collaborating as a specials team allowed her to learn more about how to integrate reading and writing strategies and content during art instruction. She also shared that it was helpful to have examples of projects that she could use with her students. She added,

They said after the first trimester we wouldn't have that much to talk about anymore. I say I would need to meet with my art team every week. And I think it is nice to meet with the building specials team every other week. I'm a specials teacher and they have no idea I'm here.

LuAnn a new teacher to the district but with teaching experience reflected that sharing ideas and getting different activities from her grade level team was most beneficial to her as a teacher. She believed that it was easier for her to plan out the week when as a team they had mapped out their instruction and what concepts they as a team would be teaching their students. Moreover, LuAnn felt that she was able to make instructional decisions based on the response of students to a lesson that had been previously taught by a colleague. Based on the teams collaborative conversation, she was able to determine if a particular activity that had been taught by another teacher would be effective and meet the learning needs of her students. She reinforced this by stating,

...you just have all these ideas thrown in but it still seems like people are kind of picking and choosing and then doing you know their own thing but you still are getting those common ideas.

LuAnn shared that she believed that teacher collaborative learning assisted her team in coming up with a better plan for classroom routines and schedules.

The way we started off at the beginning of the year just with our routine for the day and how we did our journals in the morning was part of the change. We wanted to start a reader's workshop so after talking, we kind of just threw up a schedule and started reader's workshop in the morning. We just really re-evaluate the practices we are doing so that we are improving on next year.

Lesson plan analysis showed that teachers who taught the same grade level had similar lesson plans for the week. For instance, Jane and LuAnn taught the same grade level. Their lesson plans were reviewed for the same week of instruction. Reading and mathematics lesson plans were almost identical to each other. Both of these teachers felt

that it was a time saver for them to be able to plan similar lessons during collaboration time. It also allowed them the opportunity to reflect on the student effects of the lesson and make modifications to the lesson in the future based on the shared lesson analysis.

Lesson Study

Lynn shared that in her team the big difference when planning their lessons together was that this year they designed a lesson together and taught the lesson with others on the team observing. She further explained this by stating,

We all had the same focus. We all work on making connections with reading with Debbie Miller's book. We all read the same book and in our own rooms doing our own lessons. Dealing with it in our own way and sharing back on things that worked. For example, this was a good lesson I did, etc.. This year we developed our lessons together. We watched each other implement the lesson. We critiqued and tweaked the lesson and tried it again in a different room to see if it was better. That was pretty powerful. We did that twice.

Lesson study was a significant part of each participant's Professional Learning Plan (PLP). Five of the six teacher participants planned a lesson with their team with the expectation of teaching the lesson and refining the lesson based on student response and team feedback. Each lesson study had a particular strategy focus. The strategy focus for LuAnn and Jane's team was writer's workshop. For Lynn's team the strategy focus for the lesson study was on student questioning. Brian's team addressed writing organizational strategies, and Cassie's team focused on implementing more read alouds in the content of the art curriculum. Jessie's PLP did not indicate lesson study as part of her or her team's learning goals.

All of the teachers who took part in lesson study indicated that it had a positive effect on their own instructional practices.

I have always had the focus of mind to be a really self-reflective teacher of my own lessons and teaching. Lesson study gives me a kind of secondary part of reflection. Not only self reflective but peer reflective and then being self reflective with peer reflective advice. I have a lot of things that I do..maybe to modify my lessons slightly because of working with my teammates with lesson study. A specific change is some of the reading comprehension things that we have done...some we do less of and some we are doing slightly more of because of our lesson study. Brian

Teaching Strategies

Discussion and practicing teaching strategies was an emphasis with all study participants' teams. Participants who were new teachers believed that learning these strategies with their collaborative teams assisted them in molding effective teaching practices with their students. Teachers shared the effects of their implementation of the strategies during weekly collaboration. Strategies that were emphasized were those that were promoted at the district and building level. These included explicit direct instruction, think aloud and reading aloud strategies, composing think aloud strategies and distributive practice.

Strategies were demonstrated during monthly building professional development. Teachers were then expected to discuss the effective use of these strategies at their grade level and implement the strategies in the classrooms. Lastly, teachers were to collect implementation data that would be submitted to the building leadership team. Teachers often included their reflections on the planned implementation of these strategies in their PLPs. For instance, Lynn reflected,

After the questioning lesson is taught we will debrief and discuss possible revisions to achieve deeper student understandings about questioning. Our success will be measured by our observations and insights to a better lesson!

Cassie reflected in her PLP,

Our goal is to use artist and picture books to increase the use of Read Alouds to support our art curriculum to reinforce the importance of reading.

Jessie explained in her second interview that focusing on teaching strategies has influenced her teaching in the district to some extent. She further explained this by saying,

Every district is a little different. Here they just give you the ideas (strategies). You can pick and choose what works best for you when you have 3 or 4 people sharing what works for them. You don't want to go through trial and error by yourself. Maybe it won't work for you and your students, but it is very beneficial.

Learning From Others

Of primary importance to all participants was working and learning together.

Cassie, was most interested in having more opportunities to work with grade level teachers in order to more fully integrate what she was doing in the art classroom with the content that students were learning at the grade level.

I would say my overall goal is to really be able to have them (grade level teachers) tell me what they're working on so that I can really tie more things in. In the beginning I was new and I sent out an email saying that I wanted to know when they started learning new cultures. Any way that I can connect the arts to what they are learning. I didn't get that many responses. I think I got one response from a teacher. As the year has progressed some of them have been coming to ask me, the 3rd grade teacher asked if I was willing to make beads with the kids when they are studying Africa. I said of course and was really happy she contacted me about it. I would love to have that relationship because making the connection strengthens learning.

Lynn expressed her thoughts with changes that would occur with her team next year. Her team has been very stable over the last several years in regard to team membership. They have not had a new teacher on the team for four years. She shared her thoughts on how learning together may change with a new team member.

We have a new person coming next year so I think that collaboration is a vehicle to make us a very good team. I think without that, without that we would all be off doing our own thing. In our team we don't always agree. It's kind of fun and interesting. I imagine with the new person that we'll shake up the apple cart a little bit. But change is good and part of life and part of being human. I think it's good. I think change is good. I think the new person will bring a new perspective. She's right out of first grade. She's an excellent teacher and will bring a lot to the team. I think maybe the four of us; we've been together for four years. We may not be working as hard, not as hard. I don't know about that. I think we are working as hard as can be. I think it's good to have new people. I think it changes you as a teacher when you have changes in who you collaborate with.

Often, new teachers are overwhelmed with practical problems of class management, behavioral problems, working with multiple staff members, curriculum issues and understanding the culture of a building or team. Faced with the daily stress of being a beginning practitioner, many new teachers feel a sense of isolation and confusion. It is not surprising that many new teachers after a few years of teaching leave the profession to work in other fields that are less stressful to them. The literature indicates that teacher collaboration can remove this sense of isolationism or a feeling of "sink or swim" that many new teachers feel in their first years of teaching.

The teachers in this study shared this conclusion. All study participants felt a sense of belongingness that was at least in part attributed to being part of weekly collaboration. Participants stated a sense of being part of a group; and having the opportunity to share his/her particular strengths with a team was very important to all of the teachers. Cassie was particularly appreciative of having the opportunity to develop a common behavior management plan for all specials programs. As a result of her specials team collaboration, they were able to develop a behavior checklist that was common

across all specials classes and provided the classroom teacher with evidence of a student's behavior in a particular specials class.

Brian, a teacher for seven years and Lynn, a teacher for 29 years both believed that their continued enthusiasm for learning and teaching was directly attributable to working in collaborative teams at the grade level and building level. Brian believed that it was the role of his team to continue to push each other to deeper learning and discourse regarding their teaching practices. Lynn stated that not only were those on her team her colleagues but she also felt they were her friends. They would often socialize outside of the school day but she shared that the conversation during these times frequently turned to teaching, learning and instructional practices.

Barriers to Teacher Learning

All of the teachers in the study identified several ways in which collaborative learning opportunities improved their practice and expanded their own learning. However, they also identified challenges to teacher learning. Areas that they identified as barriers to teacher learning were bringing new members into the team, individual team members who preferred to work in isolation rather than with the group and barriers with the amount of documentation that was required to show evidence of their learning.

New Team Members

Great Plains School District is a growing district. Because it is a growing district it faces unique challenges regarding personnel. Each year several new teachers are hired in the district. All of the participants indicated this could be a barrier to individual and

team learning. When a new person joins a team, it takes time to bring them up to speed with the work of the district, school and team. Brian explained this best when he said,

It happens (new teachers), but overall there is still a nice core group that builds upon itself. Which makes that challenging for your building to grow because; it's always a catch up game. We have talked a lot about differentiated learning not only for the students now but also the staff because that can be a challenge.

Lynn shared this sentiment, indicating that getting a focus or coming to a common agreement on what the team is going to study or focus on during collaboration takes time. She also shared that this becomes an easier process when you have a team that has been relatively stable. Both Brian and Lynn believed that identifying a common focus was easier if the team had worked together in the past. They felt that teams that had more new teachers seemed to struggle with this more and needed more time to come to a common focus.

Team Focus

Team focus was an important element to many of the study participants and not having focus was identified as a barrier to effective team collaboration. Focus is defined as having a structure in place, having an explicit agenda, and understanding each individual's role in the collaborative process. Focus was stated as a more significant concern for new teachers to the district rather than the veteran teachers.

For instance, both Jane and LuAnn shared individually that they believed having a specific agenda developed for each collaborative session was important. LuAnn's point was focused more on the work that needed to be done prior to collaboration time.

I think it's important to have an agenda set, set things up ahead of time, decide who you want to be there. I also think it is important to have readily accessible resources. I just think it would be nice to meet in a room.

Jane agreed and shared similar points but added that she believed it was important to not only have an agenda but to also identify role responsibilities. She also shared concerns about the behavior of one of the team members. She indicated to the researcher that this individual was not a positive team member and there was an underlying feeling of discomfort during team meetings because of this individual's behavior. She believed that identifying specific roles and responsibilities might alleviate some of the concerns with this individual. She also shared that the team did not want to share their concerns with the building principal since no other individuals outside of her team noticed this person's negative behavior. Jane explained her thinking by stating,

Keep going and keep getting ideas. I don't know what our action goals are going to be for sure for next year. I hope we can continue sharing ideas and hope we will be able to freely express everything that we're thinking and not have that divide. And I hope I can speak up more and offer more ideas.

Teacher Autonomy

Some individuals on teams are less willing to share ideas and knowledge with other team members. This can create a barrier to shared learning when not all team members are willing to work collaboratively with their colleagues. Jessie shared in her second interview that while her team seemed to work effectively during collaboration, she wished that the more veteran teacher on her team would show more willingness to share her expertise with the rest of the team. She commented that, "she has so much knowledge and expertise to share. I wish that she felt more comfortable to do this because I think I could learn a lot from her."

Study participants all felt that collegial relationships had a significant impact on the perceived effectiveness of the team. LuAnn and Jane, who are both part of the same

grade level team, shared there was one team member who was less willing to share ideas or be part of the team. Jane summed this up by stating,

I think one of the challenges of collaboration is that you really have to mesh with your team. One person can really bring you down. That's what we're realizing now. It's just a negative vibe and turns opinions upside down. We've kind of noticed some of the things people get hurt; we try to avoid that all costs. Sometimes it's hard. Sometimes you just want to be able to speak freely even if that person doesn't agree. We try to avoid conflict. Nobody ever notices that person's negativity. We don't want to put that on somebody.

Required Documentation

Documentation of collaborative work and learning was identified by the study participants as a major barrier for them. All of the participating teachers identified paperwork connected to collaborative work as a challenge for them. During an observation of Lynn's grade level collaboration session, teachers were entering in their reflections on their PLPs. As they were entering in their reflections, one of the members of the team stated, "Don't you feel like every time we do this it feels like we're back in grade school?" Another teacher added, "Let's just listen to each other's reflections and then we can add to them."

LuAnn commented during her second interview that even though there is time set aside each week for collaboration, it would be nice if they weren't expected to enter in certain data on their PLPs on specific dates because occasionally they are not ready to enter in the data. Jane added that,

We have to get artifacts to prove that we've done it. I guess I would assume if you walk into the classroom you would see that the kids are getting it. Have something right there (paper) to prove that you're doing it. I could be using my time elsewhere like supplemental work with my kids. It's a trust thing from the top down. It's up in our rooms all the time so obviously we're doing it and our kids are getting it.

Cassie identified the challenge of documentation of collaborative work as possibly a bigger challenge for new teachers who were learning many new things. Jane shared this sentiment. They both were hopeful that as they learned what was required of their new positions that challenges of documentation of their work would diminish. Cassie and Jane both believed that some of the expectations for documentation would decrease after their first year of teaching in the district.

Jane, a new teacher shared that she spent most weekends at school. She felt that she might do this more than others because she was a first year teacher. However, she also shared that she has at least three morning meetings each week. As new teachers, both she and Cassie stated that some weeks they have no morning planning time because of their requirements as new teachers in the district. Both believed this was very hard and that sometimes it was difficult to keep up with requirements. Jane further explained her point with,

I spend every weekend here! This is my life. I have my family but I don't have kids yet. It's not a factor for me to come in. There are people that aren't getting things implemented because they have families to take care of. People keep telling me probably in two years you won't use this anymore...It's really disheartening spending so much time doing this. If you're not going to use it in two years....if it is so good now why won't it be in two years?

Other study participants shared that having time to do everything that was required of them was a challenge. Cassie spent a great deal of time talking about this during her second interview. She was concerned about an upcoming pre-observation conference that she was having with her principal. She was also trying to figure out how she could get everything else done that was required of her as a new teacher.

Not only am I nervous but we have a pre-observation meeting and a post observation meeting. Plus preparing for those meetings having a portfolio and being ready to have questions filled out and ready to go...to be discussed. Having all my art materials etc. Lately, I've been having trouble just having the time to lesson plan. Just to sit down and figure out what I'm going to do before I get the art materials ready. It's a lot! Especially when you're new and learning the ropes of being a teacher.

Lynn, a veteran teacher shared similar sentiments concerning meeting all of the building learning documentation requirements. During an observation of her grade level collaboration session, Lynn shared with the team that she believed that the deadline that was set for submitting strategy implementation data affected the quality of her implementation of the strategy with her class. She further admitted to her team that she was not done with the implementation of the strategy but because the deadline for submitting data on the strategy was looming, she would do what she had to do to turn in the data.

Time of Day and Frequency of Collaboration

Time of day for teacher collaboration was brought up by all study participants as either an issue to them or a suggestion for other schools and districts to consider when planning for teacher collaboration. Cassie, Jane and Jessie, all new to the district, were concerned about the issue of time as it related to their role as a new teacher in the district. They expressed concerns about having difficulty being ready for the day, multiple other morning meetings during the week that did not allow them time for planning during their work schedule, and a sense of feeling rushed to leave collaboration in order to greet their students in the morning. They believed this affected their ability to focus on team collaboration and the learning that could occur through the process of collaboration.

Brian and Lynn, both veteran teachers suggested that if their district or school was considering changes for teacher collaboration that time of day and length of time for collaboration should be considerations. Lynn elaborated on this by stating,

I would change the time to a different time. I really like the idea of having early dismissal so teachers can have collaboration time for maybe a little longer period. Sometimes we just get started and its time to stop. Or people are feeling rushed because of the day ahead. And we're trying to relax and study yet kids are coming at 8:30. Sometimes it's hard to relax when we have kids walking in 45 minutes later. I like the idea of a little longer time, early dismissal day or something like that where we don't have the stress of kids walking in and we have to be ready at that moment hanging on us. We can actually do more of a study group kind of thing.

Brian believed the district should consider providing more flexibility with the length of time and allow teams to make professional decisions about how much time they collaborate and when they have collaboration time. He shared that he felt this would have a positive effect on the quality of collaboration and the learning that took place within the team. He believed that the district and building should provide job embedded time and continually look at ways to make the process more effective. He reinforced this idea with the following comment.

Not just sitting and saying, ok this is the way it is and we have to deal with it. But that is the way it is and we are gonna make it our best and do what we can with it. We are gonna take a look at it because we know it can be better and so try and be creative with the thinking and with that input.

Lynn and Cassie agreed with having more flexibility for collaboration. Lynn reflected that it makes sense to start with having collaboration every week but then move to "every other week" for collaboration. She also felt that by having longer collaboration sessions but less frequent might make the sessions more productive. She shared her thoughts on this by stating,

I think that idea going every other week for collaboration is sufficient in fact we might even have a more productive meeting if there was more time in between to plan for that meeting. I don't know that every week is even that necessary the more I think about it. Maybe to get started but once you're up and running I think it could cut us some slack a little bit. Why we are meeting every Thursday? Is that really necessary? Can we have a day off? It might do us some good. On your day off you may be thinking about the structure.

Cassie suggested that the frequency of collaboration may not be necessary; particularly for her "specials" team.

I think you can overdo it. I think some collaboration isn't necessary. Or maybe I don't see some of it yet. Some of it is a little too much. For instance our specials team. We don't have that much to talk about. We do have stuff to talk about because me and the world language teacher have tons of questions. But it's not something we would need to meet on a weekly basis. We meet every other week as of now. I don't know if we had to get it approved. We're supposed to meet on a weekly basis. I can't imagine meeting on a weekly basis.

Student Learning

Not only do teachers benefit from teacher collaboration, students benefit as well. Teachers who effectively collaborate with their colleagues provide their students the opportunity to observe effective collaborative practices. Additionally, teachers who are collaborative learners more frequently provide structured collaborative learning experiences for their students. Learning is constructed by the students with their peers and supported by their teachers through facilitation of learning.

Benefits to Student Learning

One of the goals of collaborative practices is to ultimately benefit students. This is especially true for minority students, students with special needs, and students of low socio-economic backgrounds (Garmston & Wellman, 2003). When teachers have an opportunity to work together they gain a wider perspective on how to work with diverse

students and have a better understanding of how to meet the needs of students who need more individualized or specialized assistance.

Collective Teacher Knowledge Base

For study participants who were part of a grade level team, a special education teacher, Title I teacher, or an extended learning teacher were also on the grade level teams. Having individuals on teams who provide more individualized instruction to students, allows teachers to gain a variety of perspectives on how to address the learning needs of students with special needs as well as those students who would benefit from extended learning opportunities. Effective teaching practices used with students with special needs can also have a positive impact on all learners. All of the classroom teachers commented on how important it was to have a special education teacher or Title I teacher or strategist on their team. They believed that the sharing of ideas and discussion on individual learning needs assisted them in developing lessons and providing instruction that benefited all learners.

Additionally, study participants shared that teachers who participate in collective lesson study practices not only benefit students in their own classrooms but students in their colleagues' classrooms. Lesson study involves the practice of planning and implementing a lesson in a collaborative manner. Teacher colleagues observe each other as they teach a lesson and provide advice and suggestions for improving the lesson. Not only does the teacher who is being observed learn from this process but colleagues are then able to teach the same lesson with the agreed upon refinements for improving the

teaching of the lesson. As a result, all students of teachers on the team benefit from collaborative lesson study practices.

Consistent Grade Level Expectations

Analysis of teacher lesson plans from teachers who taught the same grade level for the same week identified the same lesson goals and alignment to grade level expectations. There was specific evidence of consistent lessons addressing the content area focus of teacher collaboration. For instance, LuAnn and Jane both taught first grade. The teacher collaboration focus was student writing. The analysis of LuAnn and Jane's lesson plans showed a common focus on writing strategies and the same measures for assessing student writing skills. This was further reinforced during an observation of a first grade teacher collaboration session. During this observation, each teacher brought student writing samples using the same writing prompt and the same rubric for measuring student writing skills. Teachers scored each other's student writing samples. Once each teacher on the team had scored the writing samples, they compared results and discussed any differences that occurred in scoring the writing samples. They planned to use this information in order to further refine the scoring rubric as well as to continue to practice consistent assessment of student writing. Additionally, based on the information they gained from the analysis, teachers refined and revised their lessons in order to address individual student writing skill deficits. Working collaboratively to analyze student work can be one of the most meaningful forms of professional learning (Jolly, 2008).

Jessie, who worked with a veteran kindergarten team, believed that her students benefited from collaboration because of the opportunity that she had to learn from the

more veteran teachers. Jessie was not familiar with the kindergarten curriculum prior to joining the kindergarten team at Great Plains Elementary School. She commented that she was impressed with the grade level expectations that were identified specifically in the areas of reading and mathematics at the kindergarten level. She believed that having the opportunity to discuss the grade level expectations with her peers and having team members share how they taught particular lessons assisted her in her instruction in these content areas.

Student Achievement

The Great Plains School District has high expectations for addressing student achievement through consistent and effective teaching practices. Teacher PLP's must include both formative and summative data on student achievement not only as it relates to the teacher's individual professional goal but also student achievement in the areas of reading comprehension, writing and mathematics. Additionally, teachers are expected to complete pre and post testing prior to units of instruction. Teachers use this data to determine how they may accelerate instruction for those students who demonstrate proficiency in skill acquisition that is addressed through pretesting. Moreover, this data is used in order to plan instructional grouping and how to provide for the individual instructional needs of all learners.

The PLP electronic format requires all teachers to reflect on student achievement results. Analysis of the PLPs indicated that all teachers included a process and a timeline for measuring student progress. For example, Brian reflected in his PLP that he would assess his students' writing achievement every six weeks in order "to measure short term

achievement goals”. He further reflected that he would share these results not only with his team but with his students. By collecting data and collectively analyzing data, teachers have a greater awareness of their teaching practices and can adjust their practices in order to better meet the needs of their students.

All of the study participants believed that teacher collaboration significantly benefited students. Jessie stated, “Collaboration definitely helped student achievement in my classroom.” LuAnn supported this statement. “I think it’s helping to close some of the gaps that some students have.” All of the teachers believed that because they paid attention to student data and collectively analyzed the data that this had a positive effect on student achievement. As a team, they shared ideas and suggestions for implementation of research based teaching strategies that would address specific student achievement challenges. This conclusion was supported when analyzing one of the teacher’s PLP goal and student achievement results. Lynn set a goal of having 69% of her students score at an independent reading comprehension level in three months time. In fact, within the three month timeframe, 86% of her students scored at the independent level on the reading comprehension assessment. Lynn commented,

I think that the kids are coming to me from first grade talking reading comprehension since we are all using the same action plan and we all are focused on reading comprehension and writing. They are coming to me and already have some prior knowledge on these student reading comprehension strategies. I am not starting on new ground. They’ve had some background which makes it easier for me. I can take it a little deeper so that I ‘m sure when they go to third grade they’ve got to bring their schema of these strategies with them.

Cassie had a different perspective on the effects of student achievement in art instruction. She was excited with the opportunity to collaborate with her peers in order to provide a high quality art lesson. She emphasized this by sharing,

It (collaboration) has a huge effect in a beneficial way. The first time I teach something, I may not know the best way to go about it. And then if I see someone else teach it, like my mentors constantly telling me better ways to teach things. You can totally see students from day one to day two and the projects that they created but from the same lesson. I teach it (lesson) four times in a row! By day four I've got it down. It does impact... especially meeting with her (mentor).

Strategy Learning

All teachers in the study focused on particular research based teaching strategies as part of their PLP. For Lynn, she saw the effects of addressing questioning strategies and collaborating on read alouds/think alouds with her team as having a significant impact on students' ability to ask questions during reading instruction.

I have observed students eagerly asking questions before, during and after reading as I have presented read alouds/think alouds with quality literature. I have also observed an increase in their questioning techniques during guided reading groups. Students are questioning across all content areas and this has increased student engagement and comprehension. All students can identify whether the answer to a question can be found in the text, in their head or an outside source.

Jane felt that having the opportunity to discuss student achievement with her peers had a significant impact on her use of specific teaching strategies and as a result, student achievement. She looked forward to discussing specific student learning deficits with her peers. Moreover, it was important to her that her students were performing commensurate with their peers in the other first grade classrooms.

I have seen how much they've grown with the implementation of those strategies. For example, we had a meeting to discuss our kids' score in fluency, segmentation. I had a couple of kids that weren't making the progress I would've liked them to make. We talked about the different strategies to use, and

brainstormed more. I implemented those with the kids. They are back up with the other kids. It was good for my kids and theirs (team members' students) as well. I mean it helps the kids to get those ideas. "Hey this kid is not getting this, what else can I do?" I feel like I have done everything and they give me more ideas to help the students.

Jessie's team focused on the teaching of problem solving skills and making connections. Jessie believed in the importance of teaching her kindergarten students strategies for problem solving and making connections. In fact this was further solidified in her student goal on her PLP. Her goal stated that,

By the end of the year all kindergarten students who receive my instruction will apply and adapt a variety of appropriate strategies to solve problems, make connections, justify solutions, and communicate with others.

Additionally, Jessie's lesson plans included daily emphasis on teaching problem solving strategies and having students explain their own thinking to the teacher or in small groups with their peers. Moreover, the emphasis on teaching and practicing problem solving skills was evident during a 20 minute classroom observation. Students were learning initial consonant sounds and transferring their knowledge regarding these initial sounds in order to read word flash cards. Students were encouraged to explain their own thinking in the small group and make connections to prior learning throughout the teacher directed lesson.

Brian and Lynn believed that by focusing on teaching specific learning strategies across all grade levels that students were coming to the next grade level with a solid background of the strategy and demonstrating the ability to move along further in the curriculum than in previous years. Brian shared his reflections on this by stating,

We have seen an impact on our areas of focus. Three years ago we started out with a group of students who had some real fluency issues. We implemented

some things throughout the year and at the end of the year it was amazing the growth that we had seen between students. The past couple of years it hasn't been an issue.We have realized the power so we are kind of in the second year or so of some of the vertical alignment. The student response has been fairly positive but we haven't seen the full effect of it yet. You see some of the common skills and concepts coming in. But you're being able to get a little deeper. I mean I have noticed that this year from last year some of the kids have already come in with... they are already starting on a different plane. And that's more a vertical then more of a team wide but it's the same....its kind of the same philosophy it's been a by product of what people have done.

Lynn agreed with the impact of collaborative focus on strategy learning across all grade levels with her comment,

We have seen gains in the results of our collaboration. We have seen major improvement of carry over from year to year. Lessons, the interconnectedness of all things, and of the big picture.

Barriers to Student Learning

The teachers in the study did not identify any significant barriers to student learning as a result of teacher collaboration. All teachers believed that students benefited from the collective work of their teachers. The only barrier to student learning that was uncovered during the study was that at times it was difficult for teachers to spend as much time as they felt they needed to spend on a particular skill, strategy or unit of study. This was not as a result of teacher collaboration but a result of teachers having multiple responsibilities and deadlines to complete as part of their PLP. This periodically affected the amount of time teachers were able to focus on instruction of strategies or skills. For example, Lynn shared that because of the deadlines that were in place for submitting Picture Word Induction Model (PWIM) data she was not able to spend as much time on the unit her students were studying that was part of PWIM because she needed to turn in

her data on time. Again, this was the only barrier to student learning that was identified in the study.

Socialization/Culture

Study participants were part of several different grade level or content area teams. Each team was different in how it functioned as a collaborative team and attitudes regarding collaboration and shared learning. Lynn and Brian were part of more established teams with very little turnover in team members over the last five years. Jane and LuAnn were on the same grade level team. Their team had experienced frequent personnel changes with new team members joining the team each year for the last five years. Cassie's team was made up of other elementary art teachers in the district as well as "specials" teachers in the building who taught physical education, music and world language. Cassie was one of two new elementary art teachers in the district. Jessie was one of the newest members of her kindergarten team. The rest of the team had worked together for the last five years.

Benefits to Socialization/Culture

Participants in the study all expressed positive aspects of their own teams. Lynn shared her thoughts on the delicate balance of remaining friends yet not holding back while collaborating with her peers. She valued the time that she spent not only socially with her teammates but also professionally.

We have a good time together. We are very supportive of each other. We're not afraid to laugh and have fun. We're not really competitive to each other. I think there's always some of that. Which is good sometimes but we're all willing to share and help each other. If I need something I can go to anyone of them and ask for it. I don't feel I can't go to anyone of these gals and say copy this. They'll

say here it is, take it. There's no holding back. Everyone is pretty open, sharing, caring, fun and I think everybody like to learn.

Interpersonal Relationships

Interpersonal relationships among team members were a topic of discussion by most participants during the interviews. Jessie was thankful for the support and encouragement that she received not only from her team but from her mentor. She shared that her team has been "more than helpful." She further explained by sharing,

Let's see coming in...I mean especially being new from a new state, being from a whole new set of guidelines. They have been more than helpful. People go above and beyond more so than any school I've been at and it really helps me understand. It's a great place to work so far.

Cassie was also very thankful to her team for helping her as a new teacher. She also believed that it helped her to become more "personable."

My specials team I'm constantly asking questions. The world language teacher is new. There are two new specials teachers and two older ones. I'm constantly asking them questions and the music teacher is right next door. It's definitely beyond professional personalities. I think it has made it more like a family because we get that opportunity to see each other more. Even with the teams for each grade it seems like they are very close which is nice. I know that I'm close to my team. There is just a great vibe. Everyone is just smiling and happy.

LuAnn felt that team collaboration brought her team closer together and that they were more effective teachers as a result of their regular collaboration. She also indicated that she believed that team collaboration helped her team to work together and helped those who were more "reluctant to share" in her team.

Taking Risks

Brian and Lynn, the two most experienced teachers in the study discussed the importance of stretching the skills, knowledge and discourse in their teams. Brian shared

that in the beginning his team was focused on being polite and publicly agreed with each other on most things but privately had some reservations. He shared this has changed over time as he and his team push each other to uncover and respectfully share thoughts and disagreements. He believed that the development of positive interpersonal relationships and positive socialization among his colleagues encouraged risk taking among his team.

Lynn agreed that her team was more comfortable now with taking risks instructionally as well as during their collaborative discussions and planning. She shared that over the past three years of collaboration that her team had moved beyond the “nuts and bolts” to discussions on teaching research and new learning. She also shared her thoughts on the delicate balance of remaining friends yet not holding back while collaborating with her peers. She valued the time that she spent not only socially with her teammates but also professionally.

Principal Leadership

The literature on school improvement and development of professional learning communities emphasizes the importance of school leadership and more directly the role of the principal in leading a culture of shared learning. Learning leaders model the behavior they expect from their teachers.

The Great Plains School District has high expectations for the role of the building principal in creating a culture of collaboration and collective learning. Building principals regularly attend weekly collaboration sessions. Terri, the building principal at Great Plains Elementary, was observed moving to various grade level teams during

weekly collaboration sessions. On occasion, she made announcements regarding due dates for data to be recorded on PLPs or provided information concerning upcoming building professional development sessions. Most frequently she appeared to be an observer of the process rather than an active participant during weekly collaboration sessions.

Jessie, a new teacher to the district shared with the researcher that she was impressed with the level of support and resources that were provided by the principal. This was unexpected to her and new from her previous experiences in other school districts.

The principal is a wonderful leader. The materials, resources, everything is abundant. She (the principal) does well at supporting, feedback; involved- she has a growth stance.

Cassie, a new art teacher shared that her experiences so far were positive with the principal. She believed that she had the resources that she needed in order for her to do her work. She felt that the principal did a good job of creating a culture of trust and support.

I think she's very supportive. She leads our weekly meetings. Tells us what our goals are for the meetings. She creates creative ways, kind of breaking in the morning and getting us up walking around. I haven't gone to that many of them, but a lot of the meetings she has an agenda. It seems we don't get through half of the things on the agenda. I don't know how the regular teachers feel about that.

Lynn echoed these comments and added,

I think Terri is great this year. She didn't stress me out in anyway in terms of collaboration. It was pretty much whatever we were doing. I always felt like she was very supportive and confident in what we were doing. That was important to us and she was in favor of that. As far as principal involvement, I hope she continues that same level of support and confidence.

Barriers to Socialization/Culture

Study participants each addressed issues with teams taking risks, interpersonal relationships, and the ability to be honest and open with each other. The perception of the participants was based on their own personal experiences with their current collaborative teams as well as past teaming experiences. Some participants expressed concerns about the effectiveness of their team due to personality conflicts or individuals who were more comfortable working individually rather than as a team.

Taking Risks

Brian and Lynn, the two most experienced teachers in the study discussed the importance of stretching the skills, knowledge and discourse in their teams. Brian shared that in the beginning his team was focused on being polite and publicly agreed with each other on most things. He shared that individuals on the team were concerned about hurting team members' feelings. It wasn't until this was brought up by him during one of the team's collaboration sessions that things changed in how they interacted with each other. It took time for the team to build trust and to move from being polite to stretching each other's thinking and trying new things. Lynn shared that over the past several years that her team had built a culture of shared learning and collaboration. Brian believed that his team was not yet where he would like them to be in regard to collaboration and learning. Brian's vision for his team was that he hoped that they would be able to continue to push each other's thinking and skills and to take instructional risks in order to meet the learning needs of all students.

What I have seen over the years is... a lot of the work team wise. When we originally started it was kind of forced upon you and then you see something and

you try it, and then something else is forced on you and you take it in. Then something else is pushed on you which is kind of uncomfortable...which is good... and then you figure it out. We are pretty much now where it is second nature with collaboration...but what we are finding now is that we are trying to tweak things and make ourselves more comfortable with some of the more uncomfortable parts of the collaboration. ...we are all friends we all get together... but really being able to say to someone "I don't agree with that...I think that's wrong"... and say it without having any kind of feelings hurt. It was in a note today that we want to try and maintain our cognitive development in our conversations without having our social and emotional emotions impact that.

Brian also shared that being honest with each other assisted the team to move towards greater risk taking. He shared that he felt his team was working hard in this area and that if they could not take risks and be honest then they were not collaborating. He also acknowledged that if his team has changes in the make up of the team in the future risk taking may be less likely to occur until the team is able to develop a culture of shared trust.

Interpersonal Relationships

Interpersonal relationships among the team can also be a barrier to socialization/culture. During an observation of LuAnn and Jane's team collaboration it was noted that the team didn't necessarily work together. Instead, three teachers including LuAnn were observed having a conversation about a different topic other than what the rest of the team was discussing. The team had decided at the beginning of the collaboration time that they would discuss a math lesson and error analysis. While three teachers did this the other group was discussing a different content area. In the middle of the discussion LuAnn asked the question of the group, "How is it determined what you talk about during collaboration?"

Jane, who is on the same team as LuAnn did not seem to be aware of how her team divided into two teams during team meetings. However, she elaborated on her concern about one member of the team who she believed did not “mesh” with the rest of the team.

At the beginning, there were clues here and there. Some of the things weren’t meshing with all five of us. I mean things have been done behind her back. Us four are the only ones that see it. We’re not going to form an opinion about anyone else. I don’t want to talk bad about anybody. We all have seen it. That would be the only concern of our team.

Jessie believed that while her team was very supportive of her as a new teacher in the district she was hopeful that in the future one particular team member would see the value of sharing her expertise, experience and knowledge with the rest of the team.

One person on our team doesn’t share what she does with students in her classroom. I would like to learn from her because I think she is a good teacher.

Teams of three of the study participants had one or two individuals in each team that it appeared preferred working in isolation rather than with other team members. These individuals were less likely to share ideas and materials with others and in one instance a teacher physically moved her chair somewhat away from the rest of the team when they were collaborating. Jessie, Jane and LuAnn also stated a desire for these team members to be more open to sharing and participating in conversations as they believed as new teachers to the district they could learn from these individuals.

Location of Collaboration

The study participants’ teams met each week in the Great Plains Elementary media center. During this time there were approximately fifty teachers and support staff who congregated in the media center for their grade level or team level collaboration

session. Teams were expected to have their materials that they would need for collaboration with them, however on occasion it was observed that individual teachers left the media enter and came back with materials that it is assumed they got from their classrooms. LuAnn and Jane were most vocal about the location of weekly team collaboration. Both believed that building and district leadership should “trust” teachers enough to allow them to work in their classrooms as a team rather than all meet in one location. Both also believed that it would help the team work more efficiently if they were in a classroom as materials would be readily accessible to the teams.

LuAnn summed this up by stating,

I think that if you are in your room or in another teacher’s room you have those readily accessible to you so you don’t have to leave and try and search for them. I think it would be just nice to meet in a room.

However, LuAnn also admitted that if the team plans ahead and knows what the agenda will be for their meeting, it shouldn’t matter if they were in a classroom. LuAnn suggested that schools that are looking at setting up a structure for teacher collaboration should consider the location of the collaboration in their planning. Both she and Jane felt that teachers should have a choice as to where they will meet for collaboration. None of the other study participants brought this up as a suggestion or concern for schools to think about when looking at future structures for teacher collaboration. In fact, Lynn a veteran teacher shared that,

I kind of like how we do it. We’re all in the library together. It used to be everybody’s collaboration was in somebody’s room. Everyone is at a table in the library. Everyone is collaborating at the same time.

Summary

This chapter outlined the data collected from the Great Plains Elementary School teacher study participants. Based on the research questions for the study, presentation and analysis of the data took place. Teacher interview comments were organized based on where the comments fit within the categories, themes, and sub-themes of the study. Additionally, data collected from analysis of Individual Professional Learning Plans (PLPs), lesson plans, and observational data were organized within each of the identified categories, themes, and sub-themes of the study. Data collected from these areas allowed for triangulation of the data in order to reinforce the common themes and sub-themes of teacher collaboration.

The teachers who participated in the study had a clear understanding of the framework for teacher collaboration in their school. The teachers reflected on and described their experiences with weekly collaboration within the context of their grade or content area teams. Data collected from PLPs, teacher observation and lesson plan analysis supported teacher reflections and descriptions of the collaborative process. Reflections were often common among the teachers even though they were interviewed separately. However, there were also differences in perceptions and understandings of weekly teacher collaboration between new teachers in the district and those teachers who had taught in the district for at least five years. Perceptions ranged from a clear understanding of the purpose of collaboration for veteran teachers, to questions that arose from new teachers about the purpose and the processes in place for teacher collaboration.

Through the analysis of the data, a descriptive narrative emerged which expresses the feelings, thoughts, hopes, and perceptions of each teacher as it relates to his/her experiences with weekly teacher collaboration. Through the descriptive analysis, several categories, themes, and sub-themes emerged that more clearly defined the effect of teacher collaboration on instructional practices. Teachers identified the benefits, barriers, learning, and leadership supports that they believed affected their instructional practices and experiences with teacher collaboration in their school. Moreover, they provided clear suggestions for changes and improvements for their teams and their building in order to strengthen collaboration among teachers. Lastly, they shared their hopes for the future concerning collaborative practices and structures that they believe will ultimately positively impact their instructional practices in the classroom.

CHAPTER V

CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

Introduction

The purpose of this study was to identify what effect weekly teacher collaboration had on instructional practices in the classroom. An additional purpose of this study was to determine if there were differences in teacher perceptions on the impact of teacher collaboration on instructional practices. The data collected from the study included teacher interviews, teacher observations, and teacher artifacts. The data identified the effect of weekly teacher collaboration on instructional practices. It also uncovered differences in teacher perceptions regarding teacher collaboration.

Six elementary school teachers from Great Plains Elementary School took part in the study. The teachers were chosen based on the number of years of experience in and out of the school district. Two teachers were new teachers to the profession, two teachers were new to the district but veteran teachers who taught in other school districts and/or states and two teachers were veteran teachers in the district.

In relation to the research questions specific categories and themes were identified. Three categories emerged from the study. These were;

1. Teacher Learning
2. Student Learning
3. Socialization/Culture

These categories emerged from teacher interviews and were further supported or reinforced through observations during teacher collaboration and professional

development, classroom observations, teacher Professional Learning Plans (PLP), teacher lesson plans, and building action plans.

Additionally, consistent themes emerged under each of the three categories. These themes were benefits and barriers to teacher learning, student learning and socialization/culture. Lastly, with each theme, specific sub-themes surfaced from the data that supported each of the identified categories.

Conclusions

The teachers in the study shared with this researcher a number of ways in which teacher collaboration affected their practice as well as the learning of their students. They believed that weekly teacher collaboration had a positive impact on their instructional practices. They were also able to identify specific ways in which teacher collaboration benefited them as professionals as well as how it benefited their students.

There were three primary categories that emerged from the multiple sets of data collected throughout the study. Each of the categories was further defined by themes that began to evolve through the analysis of the data as well as sub-themes that fit within each of the themes. While the themes among the three categories were consistent, the sub-themes within each theme and category were not necessarily consistent although there were inter-relationships among the categories, themes and sub-themes.

The first category that was identified through the analysis was teacher learning. The themes within this category were the benefits to teacher learning and the barriers to teacher learning. Sub-themes that emerged under the benefits to teacher learning were teacher connectedness and collegiality, improved instructional practices, lesson study

process, teaching strategies, and learning from others. The barriers that created challenges to teacher learning and were identified as sub-themes to this theme were new team members, team focus, teacher autonomy, required documentation, and time of day/frequency of collaboration.

The second category that emerged from the data was student learning. Themes that were identified under student learning were benefits to student learning and barriers to student learning. Sub-themes that began to surface within the theme of benefits to student learning were collective teacher knowledge base, consistent grade level expectations, student achievement, and strategy learning. Only one barrier to student learning emerged from the data. This was the barrier of competing expectations on teachers' time which affected depth of instruction.

The third category that was uncovered from the data was the category of socialization/culture. Again the themes of benefits to socialization/culture and barriers to socialization/culture were identified in the data. Sub-themes within the theme of benefits of socialization/culture were interpersonal relationships, taking risks, and principal leadership. The barriers to socialization/culture included the sub-themes of interpersonal relationships, taking risks and the location of collaboration.

Teacher Learning

Teachers who collaborate learn from each other. One of the most effective ways in which to break down isolation is to provide teachers the opportunity to learn from each other through collaborative practices. When teachers work together they are able to get smarter together. They are able to learn from each other and share their collective

knowledge base among their team. They develop a sense of shared learning and collegiality that does not exist when working in isolation of each other.

Benefits to teacher learning: The teachers in this study identified multiple benefits to working collaboratively in their teams and in the school. The analysis of teacher artifacts as well as observational data also identified ways in which collaboration positively impacted teachers. The researcher identified that through teacher collaboration teachers were better prepared to support one another's strengths and weaknesses. New teachers learned from more veteran teachers and veteran teachers gained a sense of enthusiasm that for some was admittedly beginning to wane over the years.

Connectedness and collegiality: One of the primary benefits of teacher collaboration that was identified in the study was the sense of connectedness and collegiality with peers that most study participants described and was evident during team observations. This is consistent with what the literature identifies as a specific benefit of teacher collaboration. Garmston and Wellman (2003) found that schools that were considered most successful were those in which teachers had the opportunity to work interdependently with each other. Teachers who work closely together express a sense of excitement and renewed energy for the teaching profession. This was certainly the case in this study. Teachers who were new to the profession appreciated the opportunity to have a more veteran teacher work with them and assist them with understanding school procedures and the content of the curriculum. Teachers who were veteran teachers expressed a renewed sense of energy and excitement and appreciated the creativity and diverse thinking of less veteran teachers.

Relationships among team members grew over time. Initially, teachers who were part of more stable teams described how their team worked with a sense of politeness and caution. They began their work, simply listening to each other and learning about each other. As their teams became more sophisticated they began planning lessons together and shared how they worked with their students and the results of their instruction on student achievement. One team that had been together for five years was to a point in which not only did they plan lessons together but they pushed each other's thinking and dared to politely disagree with each other within the identified team protocol for collaboration. They experienced satisfaction in working through differences of opinion in a professional and collaborative manner. This was ultimately where this team wanted to be and hoped that they could continue to push each other's thinking and knowledge base.

Improved instructional practices: Multiple benefits to instructional practices emerged under the category of teacher learning. Teachers in the study used their collaboration time to share instructional dilemmas and to learn from the collective knowledge base of the team. Teachers also believed that their lesson plans were consistent across the grade level and that by developing and planning lessons together they believed their instruction was more explicit and better aligned to grade level expectations. The analysis of lesson plans would support this belief. Lessons that were analyzed across a grade level were consistent with each other; including common lesson objectives, activities, outcomes and assessments.

Teachers who worked together also eased the strain of new teachers as they were learning the practice of teaching. When teachers collaborate, teams are able to provide systematic professional assistance to beginning teachers. New teachers do not necessarily have the “instructional tools in their tool box” that more veteran teachers have from years of teaching. By tapping into the shared knowledge base new teachers seemed to develop confidence over time in their own skills and expertise. They built confidence over time in their ability to work effectively with all students.

Teachers also had the opportunity during collaboration time to develop their skills in assessment and identifying specific areas in which students were struggling with the curriculum. Teacher teams developed common assessments and practiced scoring the assessments in order for all teachers to be consistent with the practice of creating, administering, and assessing results of formative assessments. Teachers then collectively identified instructional practices that would address the areas in which students were struggling academically. Lastly, they shared results of these instructional practices on student achievement with their collaborative team. They became skilled in the use of data to inform their instruction.

Lesson study: The practice of lesson study and analysis of student work (Langer, Colton & Goff, 2003) helped to structure teacher collaboration time. Lesson study protocols guided the learning of the teachers, the development of lessons, and the restructuring of lessons in order to have a greater impact on student achievement. The lesson study process played a significant role in the development and reflection of individual teacher PLPs. Teachers identified specific student achievement goals and used

the lesson study process not only as a way of developing and refining lessons but also as a tool for analyzing student work and student achievement. All of the teachers in the study who used the lesson study protocol believed that it had a significant impact on their instructional practices. Furthermore, it assisted the team in identifying a shared goal and vision for their work with students. This in turn affected collegiality and professional relationships among the team members.

Teaching strategies: The practice of identifying common teaching strategies to use in content areas and then practicing these strategies as a building and/or team was identified as a benefit to teacher learning. New teachers had an opportunity to be “coached” by more veteran teachers in the “moves” of particular strategies. All teachers were able to practice the strategies in a safe and supportive environment. This allowed the teachers an opportunity to hone their skills with the strategy over time. Teachers used collaboration time to practice specific teaching strategies that would assist students in learning the identified curriculum. This was particularly important to new teachers in the district who benefited from the expertise and knowledge base of teachers who had been teaching in the district for a longer period of time.

Learning from others: This particular sub-theme was considered to be of primary importance to both the veteran teachers and new teachers. This sub-theme is also supported by the literature on teacher collaboration. Learning is social and having opportunities to learn from each other and collaborate creates an environment of trust, openness, and willingness to continue to develop instructional practices. Teacher collaboration and the opportunity to learn from others make complex tasks more

manageable. It also stimulates new learning. Teachers in the study viewed their collective work and accomplishments as being greater than their individual accomplishments. While there was some noticeable competition in one team, most teams were supportive of each other's learning and celebrated not only individual accomplishments but team accomplishments.

New teachers in the study benefited significantly from learning from others. Veteran teachers assisted these teachers with classroom management ideas, schedules, individual student challenges, lesson plan development and assuring that all expectations were clearly addressed within the context of their instruction. Additionally, they had a sense of being a part of a group and that as new teachers they could share their enthusiasm and creativity with more veteran teachers. As a result, everyone benefited from each other's skills and expertise.

Barriers to Teacher Learning

It was clear in this study that while there were multiple benefits to teacher learning as a result of teacher collaboration there were also some barriers that often prevented teachers from fully benefiting from the collaborative process. These barriers included bringing new team members into an established group, team focus, teacher autonomy, required documentation, and time of day and frequency of collaboration.

New team members. Bringing new team members into an established group can be a challenge for any existing team. It was clearly a barrier to at least one team in the study. It was also identified as a concern for a team that was well established but would be adding a new member in the coming school year. Probably the most difficult part of

bringing on a new team member is making sure that they have been brought up to speed with the work of the team and that they understand the norms and protocols of the team. Participants in the study identified that it takes time to bring new members up to speed with the work of the district, the school and team. Part of bringing new team members up to speed is helping them understand the focus of the work of the team.

Team focus. The development of team norms and the use of structured collaborative protocols assist teams in developing effective collaborative practices (Garmston, 2007). Team focus was an area that was identified as being a barrier to teacher learning. The study identified that if a team was unable to come to a common focus or goal, the effects of their collaborative work were not as significant as for those teams that were able to stay focused and follow an agenda or protocol. Additionally, through the analysis of observational data as well as teacher interview data, it was clear that if a team or teams did not make use of a structured protocol for collaboration or an agenda, less work was accomplished and teams splintered into small groups or sidebar conversations. This created feelings of unrest among some team members and a sense that these one or two team members were undermining the work of the collective group.

Teacher autonomy. It can take significant time to overcome years of habit, thought and organizational isolation. There were clear gulfs between teachers who viewed collaboration positively and embraced opportunities to collaborate and those teachers who had a mindset or preference to work in isolation and not share their practice with team members. It was discovered by the researcher that all of the participants in the study believed that relationships among their team members had a significant impact on

their perceived effectiveness as a team. If one or two team members were not likely to share their practice, teachers and particularly the new teachers in the study believed that it negatively impacted the work of the team. Clearly, the inability of one or two team members to work openly and collaboratively was a barrier to collaboration and ultimately teacher learning.

Required documentation. The discussion on required documentation of work done by teachers surfaced throughout the study. Teachers in the study shared their frustrations with all that they needed to accomplish or provide as evidence of their work. This was particularly evident in conversations with new teachers. As a result, it was difficult for new teachers to balance their professional time with their personal time. New teachers described how they were at school early and stayed late, took work home with them or came in during the weekend. For teachers who did not have other personal obligations this worked; however for those who had families or other personal obligations they found this to be particularly problematic. There is a delicate balance between setting expectations for evidence of practice and not overwhelming teachers with multiple requirements and responsibilities. The amount of required documentation along with a specific timeline for turning in documentation was also identified as a barrier under the category of student learning. Therefore, there is a clear relationship between documentation of work for teachers and the effects not only on teacher learning but student learning.

Time of day and frequency of collaboration. Time was a barrier to learning for the teachers. Time is a primary barrier to collaboration that is identified in the literature. While all of the teachers valued the opportunity to have structures in place for collaboration, they believed that either they did not need to meet as frequently as was required or the time of the day they met was a barrier to their learning. Most preferred to meet at the end of the day rather than before students arrived in the morning. It was difficult for the teachers to prepare for the day and to concentrate on their own learning when collaboration time was set for the morning. Additionally, most of the teachers in the study wondered aloud if they needed to meet weekly. All of the teachers shared that they thought it was important that they have some decision making power as it related to the time of the day and the frequency of collaboration. They also believed that it was important to consider the effects on student instructional time. They did not want collaboration to interfere with the time they had to work with students. Lastly, it was important that collaboration time was embedded into the day and not as an “add on” to their already busy schedules.

Student Learning

Student learning and the effects on student learning are an important aspect of any initiative. One of the goals of teacher collaboration is to have a positive effect on student learning. The study uncovered multiple ways in which teacher collaboration benefited student learning. Additionally, it identified one barrier to student learning that was shared by the teachers in the study.

Benefits to Student Learning

Darling-Hammond, Chung Wei, Andree, Richardson, and Orphanos (2009) highlight the importance of collaborative learning environments as part of effective school change and improved student achievement. Teacher development and teacher quality is linked to student learning (Hord, 2008). If teachers learn and develop their practice together, students benefit from this shared adult learning. Teachers experience shared responsibility for student learning.

Collective teacher knowledge base. Teachers who work collectively not only benefit students in their own classrooms, but also the students in team members' classrooms. The lesson study practice that was used by study participants further supported student learning as teachers collectively planned lessons and observed each other as they taught the lesson. After each observation, teachers gave feedback to one another regarding the structure of the lesson and observed impact on student learning. Lessons were reworked and implemented again in another colleague's classroom. Students benefited from this further lesson refinement that was based on the collective knowledge of the grade level or content area team.

All of the teams in the study had team members who served as special education teachers, Title I teachers, strategists or Talented and Gifted teachers. Students benefited from the expertise of not only their assigned teacher but the knowledge of teachers with particular expertise in differentiating instruction to meet the learning needs of all students. Additionally, Cassie the art teacher worked collaboratively with other art

teachers in the district. Her students benefited not only from her skills as an art teacher but the collective skills of the team of district art teachers.

Consistent grade level expectations. The teachers in the study shared that because of ongoing conversations and instructional study, students were exposed to the same instructional strategies and content across grade levels. Additionally, the teachers in the study indicated that they believed their students benefited from their work in collaborative teams because the curriculum was clearly articulated across all grade levels and there were explicitly outlined grade level expectations that were discussed and refined at each of their grade levels. Analysis of the teacher lesson plans and grade level expectations supported the teacher's comments regarding the identification of common grade level expectations and clearly articulated curriculum used to support instruction.

Student achievement. Because teachers collaborated on a weekly basis, formative and summative student achievement data was analyzed regularly and instruction was adjusted as a result of this data. Teachers were able to collectively share their data and gain input and advice from others on their team in order to address student performance issues. Teachers believed that student achievement was positively impacted because of their collective work in analyzing student achievement data and addressing specific learning needs based on the analysis of the data. Analysis of teacher PLPs provided evidence of improved student achievement in the identified content area that was focused on during team collaboration.

Strategy learning. The teaching of strategies to students was also identified as a benefit to student learning. Teachers discussed the implementation of strategies with students during collaboration and worked through challenges they were experiencing in teaching the strategies. New teachers found these opportunities to discuss their instruction with peers particularly helpful to them as they worked on developing their instructional skills. The teaching of common strategies was also evident as students moved from one grade to the next having similar exposure and teaching of learning strategies. Brian and Lynn, both veteran teachers believed this was evident as students entered their grade level. They believed they were able to move their students further along in the curriculum because of the common focus on learning strategies.

Barrier to Student Learning

As stated earlier, there was only one barrier to student learning that was uncovered in the study. Teachers shared that because there were multiple expectations for their time and documentation of their work, students felt the effects of this through less instructional time. Collaboration should not become so important and so much of a focus that it has an impact on student instructional time. The barrier of time was also identified as a barrier to teacher learning. There is a delicate balance between having too much time for collaboration and not enough time for instruction. Teachers in the study identified the barrier of specific timelines for completion of instructional initiatives affecting instructional time focusing on the initiative. If there was a tight timeline for completion of the documentation, instruction was cut short in order to turn in documentation on time.

Socialization/Culture

In order for teachers to collaborate, professional socialization occurs that can either promote collaboration or be a barrier to collaboration. When teachers work effectively together as learners, they develop strong professional relationships that encourage a positive team and building culture. If teams struggle in their work together, the socialization/culture that occurs at least at the team level suffers and if pervasive can negatively impact the culture of the building. The principal plays an important role in developing and sustaining positive socialization/culture in the building.

Benefits of Socialization/Culture

When teachers are able to work collaboratively and effectively with each other teachers and students benefit from these practices. Effective collaboration involves teachers working openly, honestly, and respectfully with each other. Additionally, teachers must have a willingness to take risks in a supportive and safe environment. Furthermore, principal leadership plays a key role in cultivating effective collaboration, building positive relationships and sustaining a culture of shared learning and focus on student achievement.

Interpersonal relationships. Teachers in the study expressed a sense of belongingness that was at least in part attributed to weekly teacher collaboration. They believed that not only did they learn from their colleagues but they had “critical friends” who were there when they were experiencing challenges in their career. Two of the teachers in the study shared that not only were their team mates their professional colleagues but they were also their friends outside of the school setting. They believed

this helped them to stay grounded and enthusiastic about the teaching profession and attributed to their desire to continue to teach and learn at Great Plains Elementary School.

The teachers in the study who were new to the district believed that because there was a sense of belongingness, it assisted them in dealing with the stresses of being a new teacher. They knew they had a “go to” person when they needed assistance with school procedures or new teacher requirements. Additionally, they developed strong relationships with those members on their teams who were new to the district. They had someone that they could talk to that understood what it felt like to be new to the district.

Risk taking. The development of positive interpersonal relationships and positive socialization among teachers also encouraged risk taking among team members.

Teachers knew that they had colleagues that they could count on to assist them if they needed help with students, lesson planning and instruction. The culture of the building as well as teams was one in which it felt safe to teachers to take instructional risks in order to potentially positively impact student achievement. Teachers were encouraged to try new strategies and to expand their knowledge base in order to identify possible instructional practices that could ultimately benefit students.

Teams also expressed a willingness to push each other’s thinking and encourage discourse among team members. They believed this was how they would grow as professionals and it was important to offer each other pressure and support while working as a team. In order for teams to be willing to take risks they expressed the need to feel safe among their team members and to not feel judged by others.

Principal leadership. Leadership plays a significant role in the effectiveness and success of collaborative practices. This is especially true at the building level. Effective building leaders model the behavior they expect from their teachers. Additionally, they provide the structures and supports to develop a community of learners.

The principal of Great Plains Elementary School was frequently observed working with individual teachers and observing collaborative teams. She did not necessarily participate with the teams but acted more as an observer. Study participants viewed her as being supportive and cultivating a culture of respect and shared learning. Teachers in the study also believed she did a good job of creating a culture of trust and support. She provided time for teachers to collaborate and was responsive to their needs regarding materials and resources to support their work.

Barriers to Socialization/Culture

There were identified barriers to socialization/culture. These included the willingness of teachers to take risks, negative interpersonal relationships and the location of collaboration in the building. Risk taking or unwillingness to take risks was considered a significant barrier to moving teams forward in their collaborative practices. Poor relationships with peers also negatively impacted collaboration. Lastly, location was considered a barrier to some in developing a culture of shared respect.

Taking risks. The willingness to take professional risks varied among the teams. Two teams had worked together for a long period of time and had developed relationships that promoted trust and support. These team members were much more willing to take risks and to push each other's thinking. Two other teams that included

three of the study participants had not worked together as long and were less likely to push each other's thinking or to take risks in conversations about teaching and learning. They communicated politely with each other but conversations were at a surface level and were more about the nuts and bolts of their lessons. The inability or unwillingness to take risks was identified as being a significant block to building effective professional socialization/culture at the team level.

Interpersonal relationships. Poor interpersonal relationships among team members were also found to be a barrier to socialization/culture. Teachers in the study who were part of teams that had one or more team members who were resistant to collaboration expressed frustration with weekly teacher collaboration.

The tenure of the team appeared to have an impact on the socialization of the team. For instance, one team had new team members join the grade level team each year. This created barriers in establishing consistent norms and procedures for their grade level collaboration. They were less likely to develop not only collegial relationships but also had difficulty relating to each other on a personal level. This also was believed to have negatively impacted the learning of the group as it took time to bring new members up to speed with the work of the team.

Additionally, two teachers who were new to the building believed that the principal should intervene in order to address the behavior of one team member who was resistant to working collaboratively with the team. This has clear implications on the role of building leadership in developing and sustaining a culture of collaboration. DuFour and Eaker (1998) conclude that inattention to effective communication across all teams

can be one of the leading causes for failure of change in school practices and success of collaborative teams.

Location of collaboration. The location of collaboration was also considered a barrier to socialization/culture. Study participants shared that they believed building leadership should trust teachers to make decisions regarding the most effective location for collaboration. Leadership trust is aligned to building a culture of shared trust and openness between the principal and teachers. Two of the teachers in the study believed that they should be allowed to work in their classrooms because that is where their materials are located. The other participants did not have strong opinions one way or the other but did believe that location for collaboration should be a shared decision.

Discussion

The purpose of this study was to identify the effect of weekly teacher collaboration on instructional practices. An additional purpose of the study was to understand how teachers perceive the impact of weekly collaboration on instructional practices and to identify if there are differences in teacher perceptions. The data collected from this study provides clear evidence of the effects of teacher collaboration on teacher instructional practices. It also uncovers specific differences in teacher perceptions regarding teacher collaboration on the impact of their instructional practices in the classroom. It provides compelling evidence that not only does teacher collaboration impact instructional practices but that regularly scheduled and sustained teacher collaboration is an important practice for improving teacher instruction practices and in turn positively effecting student achievement.

The Effect of Weekly Teacher Collaboration on Instructional Practices

Regularly scheduled teacher collaboration positively effects teacher collaboration in several ways. First, through structured collaborative team sessions, teachers have the opportunity to have conversations about teaching and learning and the opportunity to improve their practices together. This in turn effects instruction in the classroom in that teachers use the skills, strategies and processes that they learned through collaborative practices as they instruct students in their classroom. Discussing and practicing specific teaching strategies such as the talk aloud and think aloud strategies helps all teachers to develop effective teaching practices with students.

Improved instructional practices. Teachers who collaborate feel a sense of improved instructional practices. Teachers in the study indicated that because they collaborate, all teachers at their grade level or content area are teaching the same content. This in turn affects students as they are exposed to common learning experiences across classrooms and grade levels. Moreover, the opportunity to share expertise among the teacher team removes teacher isolation and allows for shared learning and guidance among the team. Teachers in the study planned and refined lessons together. By doing this, not only did their instructional practices improve but students benefited from the shared expertise of a team of teachers.

Application of shared learning in the classroom. Teachers also shared that through the lesson study process and collaboration they are able to take what they learn and apply it in the classroom. Teachers learned specific instructional strategies and honed their skills as a result of the team lesson study process. Lesson revisions that

occurred as part of the lesson study process allowed teachers the opportunity to improve lessons and their instruction of specific content and skills. Moreover, teachers reported that student engagement improved as a result of the lesson study process and collaborative practices.

Support for team members' strengths and weaknesses. The learning that occurs through the lesson study process can be applied to other lessons. Through collaborative practices teachers learn from each other what works and what doesn't work. Teachers are better prepared to support each other's strengths and accommodate to individual weaknesses. Working together, teachers reduce the individual planning time while increasing the pool of ideas.

Shared expertise for differentiation of instruction. Teachers in the study had support teachers on their teams that had specific expertise in working with students with special academic, social, emotional, and behavioral needs. As a result of collaborating with special education teachers, Title I teachers and Talented and Gifted teachers, teachers on collaborative teams gained a wider perspective on how to work with diverse learners. Moreover, teachers learned how to differentiate their instruction in order to meet the needs of diverse learners.

Wide perspective of student body instructional and learning needs. Teachers who collaborate also gain a wider perspective of not only the needs of their own students but the students in colleagues' classrooms. Flexible grouping and team teaching occurred as a result of teacher collaboration. Teachers planned lessons together in order to provide instruction for flexible groups as well as to plan team taught lessons. An added benefit of

this team planning was the integration of content area instruction; taking advantage of the expertise of team members who specialized in particular content areas.

Focus on instructional practices. Another effect on instructional practices in the classroom as a result of teacher collaboration was increased emphasis and study of instructional practices and teacher learning. Over time, teacher teams moved from the nuts and bolts conversations of lesson planning to a focus on research based practices and vigorous discussion about teaching and learning. Moreover, reflective conversations focusing on instruction focused on the effects of instruction on student achievement. Teachers improved their skills in analysis of student achievement data and used this data in order to adjust their instruction.

Development and analysis of common assessments. The teachers in the study developed common assessments during collaboration time to use with their students. They practiced scoring common assessments and used the data collected from the analysis of assessments in order to improve their instruction. Rich conversations occurred as a result of the analysis of assessments and not only did teachers revise their instruction but also the formative assessments that were used to measure student achievement. Collaboratively collecting and analyzing student achievement data provides teachers a greater awareness of their own teaching practices.

Collegial support for new and veteran teachers. Through collaboration, teachers are able to ease the strain that occurs as new teachers learn the curriculum, schedules and routines as well as attempt to improve their instruction. Veteran teachers provide professional assistance to beginners and encourage and support them through the

everyday challenges of teaching. Moreover, collaboration encourages explicit socialization for all new teachers in the system; including those teachers who are experienced teachers but do not have a clear understanding of staff values, traditions, resources, and supports. Lastly, veteran teachers who work collaboratively with new teachers gain a sense of renewed excitement and enthusiasm for teaching and learning. This in turn effects their instruction in the classroom as they infuse more creativity and excitement in their teaching.

Innovation and creativity in instructional practices. When teachers collaborate, they have the organizational skills and resources to innovate collectively rather than individually. Individual instructional innovation has limited impact on the system as a whole and exhausts the energy, skills, and resources of individual teachers. Collective innovation in the classroom is more sustainable and has a greater impact on the system as a whole.

Teacher Perceptions on the Impact of Collaboration on Instructional Practices

Teachers in the study clearly believed that weekly teacher collaboration had an impact on their instructional practices. Perceptions regarding teacher collaboration often varied based on years of experience in and out of Great Plains School District. Generally, teacher perceptions regarding the impact of collaboration on their own instruction were positive. However, there were some differences in perception regarding interpersonal relationships and willingness of team members to support and learn from each other.

New teacher perceptions. New teachers in the district had distinct perceptions regarding teacher collaboration. Perceptions were generally positive, however there were frustrations expressed concerning team mates' behavior and location of teacher collaboration. New teachers to the profession and new teachers to the district had similar perceptions about teacher collaboration at Great Plains Elementary School. These teachers shared the following perceptions about teacher collaboration.

- Teacher collaboration positively affected their ability to understand the curriculum more completely and as a result new teachers believed they used their instructional time more effectively
- Teacher collaboration assisted new teachers in “surviving” the daily challenges of learning a new curriculum, managing student behavior, understanding the rules and procedures of the school, and planning effective instruction
- Collaboration assisted teachers with integration of curriculum across content areas
- Lesson planning with the team assisted new teachers in mapping out instruction for the week
- Conversations about teaching and learning provided new teachers a better understanding of particular teaching and learning activities and to make decisions as to whether specific activities would assist their students in learning the content
- Collaboration assisted teachers in planning more effective classroom routines and schedules
- New teachers generally felt supported by their colleagues because of collaboration. They believed they were part of a supportive group.

- New teachers believed they benefited from collaboration when there was a clear and specific protocol followed as part of collaboration. The protocol included identification of norms for behavior, roles and responsibilities and expected outcomes of teacher collaboration
- New teachers believed that the principal needs to take an active role in team collaboration. Additionally, they expect the principal to intervene if a team member does not willingly collaborate with the rest of the team
- New teachers believed that team members who were unwilling to be part of a collaborative team or unwilling to share their own expertise were a barrier to teacher collaboration
- The physical location of teacher collaboration was an area of importance to some new teachers. They believed they should have a choice as to where they meet for collaboration rather than having to meet for collaboration in the school library

Veteran teacher perceptions. Veteran teachers in the district also had specific perceptions regarding teacher collaboration. Perceptions were generally positive and focused on the effects of collaboration on teaching and learning. The following are perceptions of veteran Great Plains Elementary teachers:

- Teacher collaboration stretched teacher thinking and encouraged risk taking and the willingness to try new teaching strategies
- Teachers experienced a sense of renewed energy and enthusiasm for teaching and learning

- Veteran teachers believed collaboration affected how they thought about teaching and learning. It assisted them in staying positive and open to new ideas
- Collaboration over time changed teacher behavior and the sophistication of planning and preparing lessons
- Strong collegial relationships were developed as a result of teacher collaboration
- Veteran teachers believed that bringing on a new member to the team could present some challenges in getting everyone on the same page. However, they believed that change was good and that they may gain some new perspectives with new team members
- Veteran teachers expressed that there may be a need for differentiated learning for new teachers. It was important to acknowledge that new teachers do not come in with the same skill set. Therefore, it was important to provide mentoring to the new teachers and assist them as they were attempting to learn not only the content and curriculum but the structures in place in the larger system
- Collaboration encouraged deep and rich conversations about teaching and learning
- Collaboration provided a safe environment to practice teaching skills and to gain feedback from peers on the effectiveness of instructional practices

Common perceptions of new and veteran teachers. New and veteran teachers also had common or similar perceptions regarding teacher collaboration. These common perceptions were:

- Teachers were willing to try new teaching strategies as a result of teacher collaboration
- The lesson study process that was part of teacher collaboration had a powerful effect on their instructional practices. Teachers learned what was important to focus on and what wasn't important or did not have a positive effect on student achievement
- New and veteran teachers found that learning from others was of primary importance to them. New teachers wanted to learn from more veteran teachers because they knew that it would strengthen their own learning and instructional practices
- Both veteran and new teachers in the district expressed frustration with the amount of documentation that was required as evidence of their learning and instruction. They struggled with the balance of their professional and personal lives. Documentation requirements were particularly problematic for new teachers to the profession. Because they were new to the profession, they had additional paperwork and documentation required in order to provide evidence of their instructional practices
- All teachers identified time and frequency of collaboration as a concern. They believed they should be part of the decision making regarding how frequently teachers collaborate and the time of day that they met for collaboration

Recommendations

Creating systems and structures that support regular teacher collaboration is a complex endeavor for any school or district. The results of this study uncovered processes, procedures and considerations that will assist district and building administrators as they plan for regularly scheduled teacher collaboration. The following are recommendations for schools and districts as they consider implementing and sustaining system wide teacher collaboration.

Teacher Learning

John Hiebert (1999a) in his review of the research on mathematics teaching and learning identified the importance of in depth learning opportunities for teachers. Teachers who collaborate learn from each other. Teacher isolation is diminished and teachers seek each other out to learn new strategies and to problem solve the daily dilemmas of teaching and learning. Teachers who collaborate positively affect not only their own learning but the learning that occurs within the system as a whole. Time must be provided within the context of the school day in order for teachers to have opportunities to engage in collaborative learning processes.

Collaborative practices are extremely complex and must address both the individual and group learning needs. Learning is constructed through collaborative efforts. Learning opportunities through collaboration are unlimited; however the motivation to learn in a collaborative environment is based within the individual learner. Collaborative processes should allow for various methods and viewpoints in learning.

Connectedness and collegiality. Garmston and Wellman (2003) shared that teacher collaboration must be structured, taught and learned. Additionally, the most effective teams were those that had teachers that were interdependent and identified and embraced shared norms and values as part of their collaborative processes. The results of this case study support these findings. Teachers who were new to the district indicated the importance of identifying specific norms for behavior and that implementation of these norms can not be left to chance. Consideration of the make up of teams should be part of the planning process. Teams with all veteran teachers, all new teachers or frequent changes in team members tend to struggle with building strong collegial relationships. Diversity of team make up is important; consider teams that are made up of both veteran and new teachers. It is understood, particularly in smaller schools that it is not always practical or manageable to realign teams for effectiveness. School leadership should be cognizant of teams that may struggle with collaborative practices and may need additional support and facilitation from the principal, curriculum director or instructional coach.

Improved instructional practices. Collaborative action research promotes continuous learning among teachers (Showers & Joyce, 1996). Weekly teacher collaboration provides for ongoing job embedded professional development. The act of shared learning fosters collective responsibility for improved instructional practices and ultimately improved student learning. Setting up systems for weekly job embedded teacher collaboration allows teachers the opportunity to learn from each other within the context of the school day.

Lesson study. One of the occurrences that break down professional isolation is providing teachers opportunities to observe each other's teaching and to provide constructive feedback to each other (Darling-Hammond et al., 2009). Providing structures that allow teachers to observe one another's practice is an additional recommendation from this researcher. Using a structured protocol such as a lesson study protocol allows teachers the opportunity to guide their observations and responses to the lessons. Gaining feedback from peers about instructional practices is a powerful method for teachers in order for them to have the opportunity to refine their own instructional practices in a supportive and encouraging environment.

Teaching strategies. Friend and Cook (1992) identify several characteristics of effective teacher collaboration. One of these characteristics is the importance of having a shared focus or goals. Great Plains Elementary focused on specific teaching strategies aligned to the building action plan. Teams were expected to learn and implement these strategies as part of their day to day instruction. A common focus assisted teachers as they worked towards implementing consistent instructional practices in the classroom. Focus on consistent school wide strategies provided opportunities for teachers to assist each other as they worked through implementation of the strategies, allowed them to practice the strategies in a safe environment, and provided them an opportunity to gain constructive feedback from their peers regarding the fidelity of the implementation of the teaching strategies.

Required documentation and time commitments. Requirements for documentation of instructional practices as well as student achievement results were an ongoing concern of the teachers in this study. While they understood the importance of documentation, they struggled with the impact it had on instructional time with students. Leadership must identify specific evidence that teachers should provide as part of their work in collaborative teams. This may include sample lesson plans, student work samples, student achievement results, and evidence of reflective practice among the team. However, based on the results of this case study, attention must be paid to the delicate balance of setting expectations for documentation or evidence of collaborative work and the impact on teacher time to meet these responsibilities versus the effect on instructional time with students.

Additionally, teachers in the study spoke frequently of the issue of balancing their multiple responsibilities at the building and district level. Teachers often feel overwhelmed with all that they do as part of their teaching position. When a district or school considers implementation of ongoing teacher collaboration, time should be spent identifying those teacher responsibilities that could align with collaborative practices; such as lesson planning and analysis of student work. Internal and external support may need to be provided to teachers in order to assist them in understanding how teacher collaboration can help them do their professional work in a more efficient and effective manner. Lastly, teachers should be part of the decision making regarding the balance of time and teacher expectations.

Student learning. Eastwood and Seashore-Louis (1992) believe that collaborative practices are the single most important factor in school improvement. Additionally, an important component of school improvement is increased student achievement. Student learning is positively affected by teacher collaboration. When teachers collaborate, not only do students benefit from the skills and expertise of their own teacher but the collective knowledge of all teachers on the collaborative team. Team teaching, team lesson planning/lesson study, and student achievement data analysis should be encouraged with collaborative teams in order to build and sustain this collective knowledge base and ultimately impact student achievement.

Principal leadership. Building and district leadership must clearly define a vision for collaborative work at both the district and building level (Dufour & Marzano, 2009). The vision should include what will be the expected impact on student achievement as well as impact on teacher instructional practices in the classroom. Additionally, the vision should outline the vision for professional development and professional practice as a result of collaboration.

Once a vision has been created for job embedded teacher collaboration, leaders must address and clearly define the purpose of teacher collaboration and expectations for teacher collaboration. Additionally, district and building leadership must address how teacher collaboration will be supported over time and how the effects of teacher collaboration will be evaluated on an ongoing basis. Support includes adequate resources for materials, space for teams to meet and possible times for meeting that is job embedded time and not an “add on” to the school day. Support also includes building

leadership providing coaching and feedback to teachers regarding instructional practices and collaborative processes. It means providing positive recognition for the work that is being done by teams and encouraging continued growth in both individual as well as collective professional learning. Moreover, district leadership must clearly outline expectations for building leadership to support collaborative teams and identify methods for ongoing communication with teams. Effective school leaders work with staff members in order to create the culture, structures and dispositions for continuous collaborative practices.

Recommendations for Future Research

The following recommendations for future research are offered based on the findings of this study:

1. This study was limited to teachers in an elementary school. Therefore, further research on teacher collaboration is needed with teachers at the secondary level.
2. This study was limited to a relatively small number of elementary teachers. Further research should be considered with a larger sample number of teachers.
3. This study was focused on the effects of teacher collaboration on instructional practices. Additional research should be considered regarding the effects of teacher collaboration on student achievement.
4. Future research is suggested on the impact of building leadership on collaborative practices in a school setting.
5. The research participants in this study were primarily female teachers.

Consideration for future research could include the study of an equal number of

male and female teachers in order to determine if there are similarities or differences in perception of teacher collaboration on instructional practices based on gender of participants in the study.

6. Participants in this study taught in a district with little student diversity.

Further research should focus on the impact of teacher collaboration on instructional practices in schools with a high percentage of students who are ethnically and culturally diverse.

7. General education and special education co-teaching is a practice that is being encouraged in order to meet the learning needs of students with special needs within the context of the general education setting. Further study should be considered regarding the effect of collaboration on co-teaching practices.

8. Instructional coaching is a model that is currently in the literature focusing on effective school improvement practices. Consideration for future research could include the study of the effect of instructional coaches on collaborative practices.

9. The use of protocols and norms had a positive effect on teacher collaboration. Consideration for future research could include the study of the types of protocols that are most effective in promoting collaborative practices in a school setting.

10. This study focused on collaborative practices among teachers. Consideration for future research could include the study of the effect of principal collaboration on leadership practices in a school district.

11. This study focused on teacher collaboration in a suburban district. Further research should focus on the impact of teacher collaboration on instructional practices in rural versus urban school districts.

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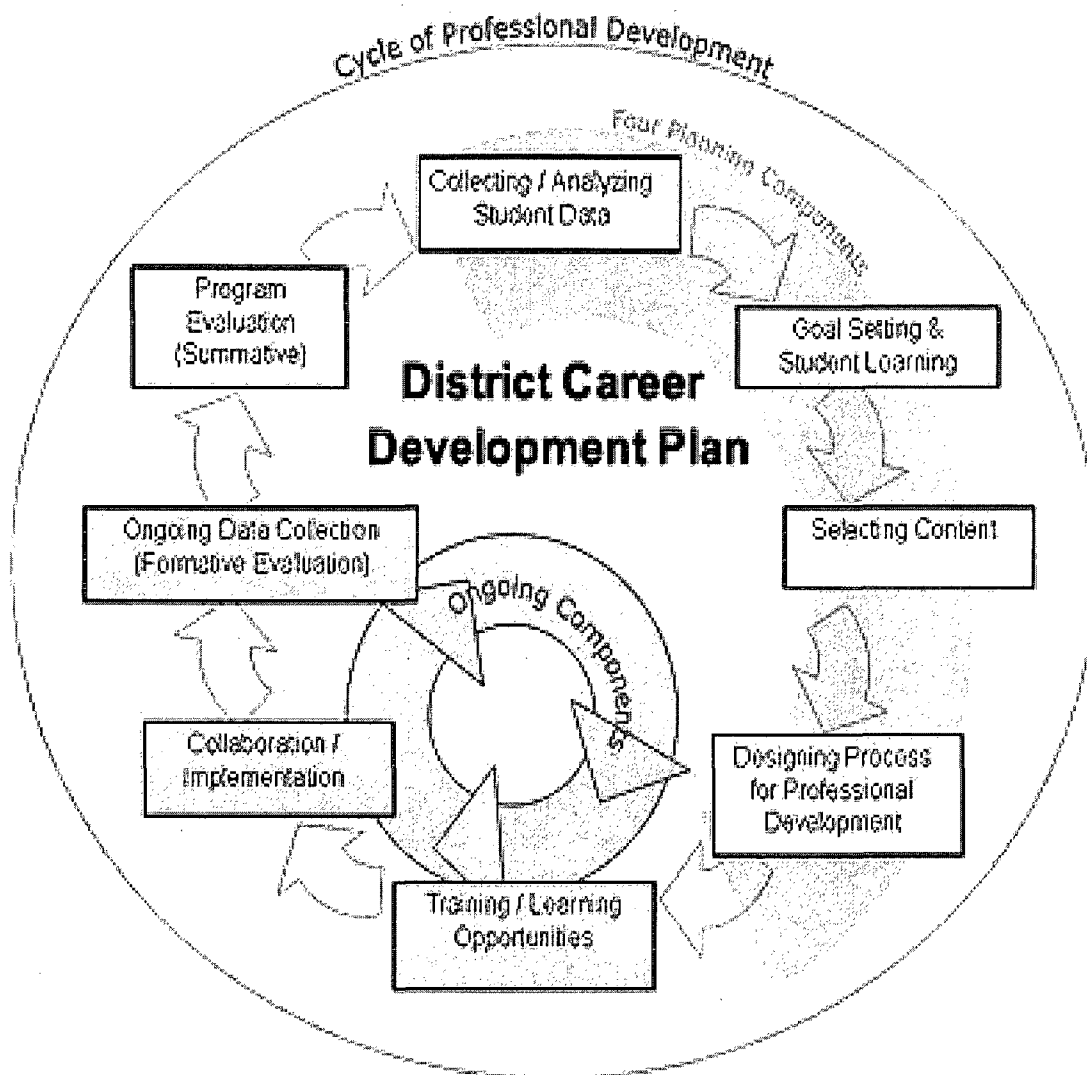
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APPENDIX A

IOWA PROFESSIONAL DEVELOPMENT MODEL



APPENDIX B
INTERVIEW PROTOCOL

1. Thank the teacher for agreeing to be interviewed
 - a. Thank you for agreeing to participate in this study
 - b. I appreciate you taking the time out of your day to do this
2. Review the consent agreement
 - a. Your name will not be identified in the dissertation
 - b. The name of your school will be changed to support confidentiality
 - c. Any factors that would identify you will be kept confidential
3. Request permission to audiotape
 - a. I would like to audiotape our conversation. Do I have permission to do so?
 - b. If at any point in our interview you wish to stop the recording, please let me know and I will stop the tape recorder.
 - c. To clarify for you, I will be the only one who will listen to the tape.
4. Opportunity for questions
 - a. Do you have any questions?
 - b. Respond to questions
 - c. If there are no questions, I will begin the interview

APPENDIX C
INTERVIEW QUESTIONS
FIRST INTERVIEW

This is our first interview. The first few questions will help me to get to know you as a teacher and learn more about your collaboration team.

1. Please tell me how long you have been a teacher in this district?
2. Have you taught any other grade levels beside the current grade level assignment?
3. Tell me about your school?
4. Tell me about the make up of your grade level team
 - a. How many teachers are on the team?
 - b. What are their teaching positions?
 - c. Approximately, how long have each of them taught?
 - d. Are there any other characteristics that will help me learn more about your team?
5. Please describe your school's action plan.
 - a. The process for developing this year's plan
 - b. Who was involved in the development of the plan
 - c. How the plan relates to your grade level collaboration
6. Please describe your experiences with collaboration prior to this school year
 - a. During student teaching (if a first year teacher)
 - b. At your previous school last year

- c. Last year in the building
7. Tell me about the weekly collaboration you have this year
 - a. Please describe how these experiences were different or similar to your experiences with collaboration in the past
 - b. Describe what you believe are the benefits of weekly collaboration
 - c. Describe what you believe are the challenges of weekly collaboration
 - d. Describe any changes or revisions you would make to weekly grade level collaboration
 8. Tell me how weekly collaboration has affected your instruction in the classroom
 - a. Describe any changes that have occurred in your instruction due at least in part to weekly collaboration
 9. Tell me how weekly collaboration has affected your students' academic achievement
 - a. Describe student achievement growth
 - b. Describe student response to instruction
 10. Describe what you know or believe the research says about the effects of teacher collaboration on instructional practices
 11. Tell me what your hopes are concerning weekly collaboration in the coming months
 - a. Principal involvement or support
 - b. Collaboration time

- c. Effects on your instructional practices
- d. Effects on your professional relationships with your colleagues
- e. Student achievement effects

12. This is the end of the questions for the first interview. Is there anything that you would like to add or clarify concerning any one of the questions that I have asked you today?

13. Again, thank you for your time and I will ask to schedule a second interview with you soon.

APPENDIX D
INTERVIEW QUESTIONS
SECOND INTERVIEW

1. Please tell me how your weekly collaboration effects the instructional decisions that you make in the classroom?
2. To date, what effect has your grade level team had on your instructional decisions?
3. What kind of effect are you seeing in your student's student achievement/student engagement as a result of weekly collaboration?
4. Have you experienced any challenges with weekly collaboration since the last time we spoke?
 - a. If so, what kinds of challenges?
 - b. How have you responded to these challenges?
5. What involvement has your building principal had to date with weekly collaboration?
6. How has the building professional development effected or impacted weekly collaboration?
7. Has your team made any changes or revisions in your weekly collaboration process?
8. Over the next month, how do you see your team using weekly collaboration?
 - a. For lesson plan development
 - b. For lesson plan analysis

- c. Studying and analyzing student achievement results
 - d. Studying and analyzing student response to lessons
9. This is the end of the second interview. Is there anything that you would like to add that will help me to better understand how weekly collaboration has affected you as a teacher and your instructional practices?

APPENDIX E
INTERVIEW QUESTIONS
THIRD INTERVIEW

1. This is our last interview session. I want to thank you again for agreeing to take part in this study. Do you have any questions about the study that I may answer for you at this time?
2. Since this is our last interview session, I would like to understand what kind of overall impact or effect weekly collaboration has on your instructional practices.
 - a. Please tell me how weekly collaboration has affected your lesson planning process?
 - b. How has weekly collaboration affected your professional relationships with your team?
 - c. What kind of effect do you believe it had on student achievement in your class?
 - d. What would you say has been the most beneficial aspect of your collaboration with team members?
 - e. What would you say has been your greatest challenge with collaboration?
3. How has weekly collaboration been supported by your principal? Would you like to see any changes in this area and if so, what would be these changes?
4. How has weekly collaboration affected your career development plan?
5. Overall, how has weekly collaboration affected you as a teacher?

6. Overall, in what ways has weekly collaboration affected the climate and culture in your building?
7. What are your hopes for weekly collaboration in the future?
 - a. For your grade level team
 - b. For your building
 - c. For the district
 - d. For your own professional development
 - e. For your students
8. Is there anything that you would like to add concerning the effects of weekly collaboration on you as a new or veteran teacher?

APPENDIX F

PERMISSION FROM THE SUPERINTENDENT OF SCHOOLS TO COMPLETE THE
STUDY**Subject: Acknowledgement of Research Plan for Laurene Lanich-Doctoral
Candidate**

I am happy to acknowledge that Laurene Lanich will conduct research for her doctoral dissertation in the Great Plains Community School District.

I understand that the purpose of this study is to identify the effect of weekly teacher collaboration on instructional practices in the classroom. The study will involve two teachers who are in their first year of teaching, two that are new to the district but have taught at least five years, and two teachers who are veteran teachers and have taught in the district for several years.

It is my understanding that the information gained from the interviews, lesson plan analysis, and observations will be used in Laurene's dissertation entitled: "The Effects of Weekly Teacher Collaboration on Instructional Practices in the Classroom."

Should you require further information, please do not hesitate to contact me at (XXX) XXX-XXXX.

Sincerely,

Superintendent Of Schools
Great Plains Community School District

APPENDIX G

WRITTEN INFORMED CONSENT

UNIVERSITY OF NORTHERN IOWA**HUMAN PARTICIPANTS REVIEW
INFORMED CONSENT**

Project Title: The Effect of Weekly Collaboration on Instructional Practices in the Classroom

Name of Investigator(s): _____ Laurene Lanich _____

Invitation to Participate: You are invited to participate in a research project conducted through the University of Northern Iowa. The University requires that you give your signed agreement to participate in this project. The following information is provided to help you make an informed decision about whether or not to participate.

Nature and Purpose: The purpose of this study is to investigate the effects of weekly collaboration on Instructional Practices in the Classroom. The study will be a qualitative study and will include observations, lesson plan analysis and interviews with teachers.

Explanation of Procedures: The study will be made up of observations, artifact analysis and interviews with six teachers from the same elementary school. Teachers were identified by length of tenure in the district as well as years of experience. Two teachers will be first year teachers, two teachers new to the district but have at least five years of service as a teacher, and two teachers who are veteran teachers and have taught in the district for several years.

The observations will occur during district and building professional development as well as during weekly grade level collaboration times. Observations will occur three times during the study. One observation will take place each month. An audio tape will be used in order to record audio during these observations. The investigator will also take notes during the observations that will include frequency and duration of participation and behaviors noted during the observation.

Additionally, classroom observations will take place to observe the classroom implementation of strategies learned or discussed during collaboration. There will be a total of one classroom observation per teacher. These classroom observations will be coordinated to occur on the same day as an interview or observation of weekly

collaboration. Observations will be videotaped and will only include the teacher. Audio and videotapes will be destroyed once all field notes are collected and the data is analyzed by the investigator.

Interviews will also be audio taped for transcription purposes. Not less than three interviews will occur with each study participant. The interviews will each last no longer than 45 minutes. One interview will be completed at the beginning of the study, the second interview the following month, and the last interview will take place in the third month of the study. The total participant commitment time will be no more than three months. Again, all audio tapes will be destroyed once field notes are collected and analyzed by the investigator.

All information gathered during observations and interviews will be kept confidential. Results of the study will be shared using fictitious names of the study participants.

Artifact analysis will occur using copies of the teachers' existing lesson plans. Information gathered from these analyses will also be kept confidential. Again, results of the analysis will be reported using fictitious teacher names.

Discomfort and Risks: There are no foreseeable risks or discomfort to participation in this study.

Benefits and Compensation: There is no direct benefit or compensation for participating in this study.

Confidentiality: Information obtained during this study which could identify you will be kept confidential. Pseudonyms will be used in transcription and field notes. The summarized findings with no identifying information may be published in an academic journal or presented at a scholarly conference, if applicable.

Right to Refuse or Withdraw: Your participation is completely voluntary. You are free to withdraw from participation at any time or to choose not to participate at all in the study.

Questions: If you have questions about the study or desire information in the future regarding your participation or the study generally, you can contact Laurene Lanich at 319-721-2593. You can also contact the office of the IRB Administrator, University of Northern Iowa, at 319-273-6148, for answers to questions about rights of research participants and the participant review process.

Agreement: I am fully aware of the nature and extent of my participation in this project as stated above and the possible risks arising from it. I hereby agree to participate in this project. I acknowledge that I have received a copy of this consent statement. I am 18 years of age or older.

(Signature of participant)

(Date)

(Printed name of participant)

(Signature of investigator)

(Date)

(Signature of instructor/advisor)

(Date)

[NOTE THAT ONE COPY OF THE ENTIRE CONSENT DOCUMENT (NOT JUST THE AGREEMENT STATEMENT) MUST BE RETURNED TO THE PI AND ANOTHER PROVIDED TO THE PARTICIPANT. SIGNED CONSENT FORMS MUST BE MAINTAINED FOR INSPECTION FOR AT LEAST 3 YEARS]

APPENDIX H

RELEASE FOR AUDIO/VIDEO RECORDING

Permission Form to Audio/VideoTape for Laurene Lanich's Dissertation Study

I, _____ agree to be audiotaped/videotaped for the purpose of collecting
Participant's Name
data for Laurene Lanich's dissertation entitled, "The Effect of Weekly Collaboration on
Instructional Practices in the Classroom". I understand the data collected will be used
only for the study and participant's names and positions will be kept confidential.
Pseudonyms will be recorded in the field notes rather than actual names that would
identify participants. I also understand that once the field notes are collected and data is
analyzed, the audiotapes and videotapes will be destroyed by the investigator.

Signed:

Name of Participant_____
Date